THE ARGUMENT

FOR A FINITIST THEOLOGY

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A Dissertation

Submitted to the Board of University Studies of
the Johns Hopkins University in conform-
ity with the requirements for the
degree of Doctor of Philosophy.

1917

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Chapter

INTRODUCTORY CONSIDERATIONS

1. The Method of Theological Inquiry:- Theology may
adopt any one of three methods or it may combine two or all
of them with varying emphasis upon each. It may appeal to
the immediate experience of the mystic, or it may simply af-
firm and arrange in systematic form the doctrines authorita-
tively taught by the church and the bible, or it may depend
upon the "reason" and "conscience" of the individual inquirer.

The first method would, of course, be the best if the
experience in question were not so rare. Assuming that the
experience of the mystic constitutes a genuine insight into
the fundamental nature of reality, he, nevertheless, stands
in the same relation to his fellowmen as a man with normal
vision to a race of men blind from their birth. It would be
vain for the seeing man to discourse of the beautiful colors
to be seen on every side. Indeed, it would be impossible for
him to express his experience in words, since language is a
social product, and the social mind of the hypothetical race
would know nothing of color. Thus the mystic's direct vis-
ion of God can not be described in terms which can be under-
stood by ordinary men, and, even from his own point of view
or from that of a fellow mystic, his experience must ever
remain in a measure ineffable. Moreover, the difficulty of
the mystical method is aggravated by the fact that the non-

mystic may not be willing to grant the objectivity of the mystic's experience. And the rarity of his experience may be made a reason for regarding it as illusory. Indeed, it may be very plausibly maintained that the alleged "revelations" of the traditional mystic are evidences of a pathological condition produced by his long-continued vigils and fastings. This hypothesis is suggested, at least, by phenomena such as those which William James has described under the name of the "anaesthetic revelation"[1]. Accordingly, the non-mystic may be justified in believing that his lack of the sense of immediate fellowship with absolute reality is not an indication of spiritual poverty, but rather an evidence of sanity.

The second method - that of external authority - received a mortal wound in the time of the Reformation, when it was discovered that the two sources of authoritative teaching, the Church and the Bible, did not always agree. To be sure, the Protestant as well as the Roman Catholic still retained the method of authority. But the mere knowledge that the schism had occurred operated to impair the confidence of the intelligent layman in authority of any kind; and for the theologically trained man the Protestant appeal to the Bible as the only rule of faith and practice contained the seed of its own destruction. For the careful study of the sacred writings which was logically required by the formal principle of Protestantism soon showed that these writings, instead

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(1) The Will to Believe, pp. 294ff. (Note.- For full titles, etc., see the appended bibliography.)

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of containing one uniform and consistent revelation, contain several different and even conflicting systems of doctrine, and bear clear evidence of having been produced in much the same way as the other sacred books of antiquity. Thus, altho this was certainly not the intention of the original Reformers, the logical and historical result of the Reformation has been to refer all questions of doctrine to the "private judgment" of the individual Christian.

The third method, that of reliance upon reason and conscience, is, accordingly, the one that is dominant at the present time, at least among enlightened men and women. Having thrown off the authority of the Church, and being distrustful of the genuineness of the mystic's experience, they take as their only criterion of truth the reasonableness and ethical attractiveness of the doctrines in question.

It is important to note, however, that these three theological methods - that of the mystic, that of the authoritarian, and that of the self-reliant reasoner - are almost never found pure. The traditional mystic has usually been, or at least supposed himself to be, a loyal son of the Church; and his revelations have usually been in superficial agreement with its teachings. St. Thomas Aquinas employs the method of authority; but he also reaons, so long, at least, as reasoning serves his purpose. The "modern" man is no more consistent. Theologians who in theory have given up the appeal to any external authority nevertheless slip back now

and then into the argument from scripture and tradition. And among religious people who are not theologians, one result of the modern revolt against the authority of the Church and the Book has been a curious sentimentalism in religious thinking, a sort of mitigated mysticism, which exalts "intuition" and "immediate feeling" as over against "reason".

It must be admitted, I think, that there is a sense in which the scriptures possess authority, and ought to possess authority, even for the completely emancipated thinker. Their authority may be described as suggestive rather than coercive, as accidental rather than constitutive. Many biblical doctrines are found to be true, but their truth neither consists in nor is established by their quality of being biblical. In other words, the authority of the bible is not like that of a constitution or of a legal code, but rather like that of a text-book in chemistry or some other laboratory science, the statements contained in which are to be accepted or rejected by the student according as they are, or are not, experimentally verified.

There is also a relative justification for the claims of "intuition", "instinct", or "immediate feeling". This justification consists in the obvious fact that "reason" in the sense of mere intellection is barren. Before there can be any reasoning in this narrow sense of the term, there must be (a) sense-perception, and (b) perception of "goods" or

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of relative values. Viewed in this way, reason does not
bring forth truth; it has the humbler office of determining
which of the offspring of "intuition" may be worthy of pre-
servation and ought to be acknowledged as true. In other
words, we may be said to reason when we inquire which of our
immediate perceptions of fact or of value are implied by, or
are compatible with, other immediate perceptions. Thus there
is a sense in which both sense-perception and the perception
of values are more fundamental than reasoning. But immediate
perception alone is not a sufficient criterion of truth. For
one of our perceptions of fact is, that immediate perceptions,
whether we limit our view to the experience of one mind or
consider the experience of a larger or smaller group, are not
all logically compatible; and, that they ought to be logic-
ally compatible, is one of our perceptions of value. If this
perception of value is to be accepted as genuine, some imme-
diate perceptions and some inferences from such perceptions
must be rejected as illusory or mistaken. But, when immedi-
ate perceptions are found to be mutually repugnant, that is
to say, when it is impossible for all to be genuine in the
same logical universe, the only arbiter that can decide be-
tween them is the reason. And this deciding between incom-
patible verdicts of "intuition" is what we mean by reason,
when we say that the method of theology must be the method of
reason, rather than of mystical experience or of dependence
upon authority.[1]
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(1) Cf. Russell. Scientific Method in Philosophy, pp. 21f

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2. The Religious Value of the Idea of God:- We value
the idea of God, and seek to convince ourselves that the
idea is "real", because we feel the need of God. Our inter-
est, however, is practical rather than theoretical. As far
as the man of science is concerned, there may be a God; but
the scientist long ago discovered that he, as scientist,
has "no need of that hypothesis". If, for example, a geolo-
gist should tell us that the strata of rocks occur in a giv-
en order because God laid them down in that way, or if a bo-
tanist should say that a certain flower has five petals be-
cause God made it thus, even the least enlightened theist
would admit that the assertion is from the standpoint of
science irrelevant. And, in general, to "explain" the occur-
rence of any particular phenomenon or group of phenomena by
reference to divine agency is an evasion of the problem at
issue.

The value of the idea of God is, then, to be sought in
the domain of practice rather than of theory. It is moral
and religious rather than scientific. Traditional theology
has given the Divine Being the attributes of omnipotence, om-
niscience, omnipresence, and moral perfection. Modern theol-
ogy places moral perfection first, and rightly insists that
the other attributes have religious value only when moral per-
fection is presupposed. First of all, God is good; and his
infinite wisdom and might are subservient to his infinite love.[1]
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(1) Cf. Clarke. The Christian Doctrine of God, pp. 70ff.

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Beginning, then, with the thought of the infinite good-
ness of God, one use of the notion of Deity at once suggests
itself. God, as the absolutely good being, is man's moral
goal or pattern. "Be ye perfect as your Father in heaven is
perfect", becomes the maxim of the truly devout worshipper.
God is the supremely perfect hero, the supreme object of imi-
tation.

Next, combining the notion of perfect goodness with that
of omniscience, we derive the idea of God as the righteous and
completely informed Judge of human conduct. The more naive
worshipper thinks of a Day of judgment at the end of the world;
the more sophisticated, of a judgment continually going on.
Whichever way the thought is taken, the believer in an all-wise
and perfectly good Being has always before him the idea of an
impartial and all-seeing Spectator who "searcheth the reins
and the hearts". What is concealed from one's fellowmen is
fully known to him. Wherein one has been misjudged by his
fellows, he is judged rightly by God. At the tribunal of the
Omniscient One, absolute justice is dispensed.

Furthermore God is all-powerful. He is the Sovereign of
the Universe. He has created, and now upholds and governs all.
Because he is omnipotent his universal purpose will eventually
be completely fulfilled. The life of the believer himself and
that of the group to which he belongs can not become a failure.
Defeats are merely reverses, suffering is chastisement. Faith
in an omnipotent God is the ground of an assured confidence

in the ultimate triumph of the Right and the eternal survival of the Good.

Lastly, the attribute of omnipresence makes possible the thought of a divine Companion and Friend. Tho foes may scorn and friends forsake, there is a heavenly Father to whom one may flee for sympathy. Tho the believer is alone in the world, he is not alone, for God is with him.

Such, crudely and inadequately expressed, is the meaning of God in the experience of his worshippers. In a word, the heart of the true believer is filled with peace,-- with the "peace of God which passeth all understanding".

But the peace of God is not a peace of quiescence. The truly religious man is not simply the contented man. His contentment is combined with a divine discontent with himself and his world. A "spark" has disturbed his "clod". He, indeed, takes "no thought for the morrow", but he labors for the morrow and for many days thereafter. He seeks "first the kingdom of God and his righteousness", and yet is a man of affairs. He believes that the sin and the suffering and the sorrow of life have their place in the divine economy, yet he is a reformer and seeks to make the world better and happier.

Such a paradoxical emotional attitude can hardly be supposed to be grounded in a logically consistent doctrine of God. Indeed, the paradoxical character of the typical religious experience would suggest a self-contradictory ground. But, whether the traditional idea of God is self-contradictory or not, and whether the accompanying emotional reaction is paradoxical

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or not, both the idea and the emotional reaction have been of incalculable significance in human life.

3. A Prospectus of the Ensuing Discussion.- In the following chapters I shall not attempt to discuss the traditional arguments for the existence of God. For, whatever be their logical virtues and shortcomings, the ontological, cosmological, and teleological arguments are defective in the main point: they do not prove the existence of the sort of God in whom religious faith is interested. Our principal concern will be with questions such as this: How must the idea of God be transformed if it is to be logically tenable, and morally and religiously serviceable? Accordingly, while the existential question will not be wholly ignored, we shall be chiefly interested in the question of the possibility and religious adequacy of the conception of Deity.

The next chapter, accordingly, will contain a brief account of some of the contradictions which lurk in the popular (Christian) idea of God. This will be followed by a critical exposition of two rival attempts to rationalize or to find a substitute for the traditional conception. These contrasted theories are the theory of monistic idealism, which in its specifically theological aspect is a doctrine of the divine immanence; and that of pluralism, with its doctrine of a "finite" God.

Three chapters will be devoted to a discussion of the problem of infinity and of some of its theological implica-

tions. In the writings of Charles Renouvier and his follow-
ers, the finitude of the world, and also of its Creator, is
held to be demonstrable by means of a logical examination of
the notion of infinity; for such an examination leads them
to the rejection of the "actual" or "realized" infinite. On
the other hand, some monistic idealists, notably Josiah Royce,
have made the conception of the realized infinite the very
corner stone of their philosophy. In this they have received
aid and comfort fr m certain mathematicians, who have formu-
lated the conception of the so-called New Infinite. In view,
therefore, of the stragetic importance of this subsidiary is-
sue, I shall devote Chapters VI and VII to the consideration
of these contrasted ways by thinking about the infinite,and
the eighth chapter to a discussion of the definition of infin-
ity. My conclusion will be that the formulation of the "new"
definition has not removed the logical objections to monistic
idealism, nor at all impaired the cogency of the reasoning of
Renouvier and his school.

The last chapter of the dissertation will contain a brief
summary of all that has gone before, together with a further
examination of the conception of a "finite" God.

CHAPTER II.
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SOME ANTINOMIES IN THE POPULAR NOTION OF GOD.

No very profound study is required to show that the pop-
ular notion of God is shot through with contradictions. Some
of these are evident to the popular mind itself. Others do
not appear until the notion is examined with more than ordi-
nary care. Without any pretence of making a complete enumer-
ation, I shall point out a few of these difficulties.

1. Goodness versus Power in Relation to the Existence
of Evil. - The popular mind is keenly interested in the prob-
lem of evil. In fact, popular theology is largely a theodicy.
Some years ago I heard a man of no special scholastic training -
in fact, he was a street car motorman - discussing the prob-
lem. He put it very bluntly, but also very well from his point
of view, in the words, "If God is all-powerful, why doesn't he
kill the devil?" The first attempt at a theodicy was probably
the assumption that there existed a spirit of evil, who in
point of power and intelligence was measurably equal to God
himself. The existence of sin, accordingly, and of all the
physical evils of nature, the pains and sufferings of men and
animals, were blamed directly or indirectly upon this spirit
of evil. But it is easy to see that this is not a solution
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of the problem, but only a device for throwing it farther
back; and the natural question then is, "If God is all-power-
ful why does He tolerate a cosmic rival?"   For the existence
of a devil is surely a limitation of God's power.   The diffi-
culty is immeasureably intensified, if with the conception of
God we combine the traditional thought of a place of torment.
In Mill's phrase "Multitudes have held the undoubting belief
in an omnipotent Author of hell, and have nevertheless identi-
fied that being with the best conception they were able to
form of perfect goodness."   The slovenliness of ordinary thought,
thinks Mill, is the only explanation for the combination of
such contradictory elements in one concept.[1]

Even if the notion of hell is given up, the problem re-
mains in essence the same.   How can a world so full of evil be
the work of an author combining infinite power with perfect
goodness?   How are we to account for the destruction wrought
by tornadoes and earthquakes, for the sufferings imposed by
beasts of prey upon their victims, and above all for man's in-
humanity to man?   Why does a good God permit sin and suffer-
ing in his world?   The antimony can be expressed no better
than in the words of Ukichi Kawaguchi (Am. Journ. of Theology,
Oct. 1915,) "The actual process of nature suggests either
that God is impotent to carry out His plans without evil con-
sequences, or that there are evil forces which are counteract-

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[1] Autobiography, p. 41.

ing His activities".

The popular attempts at reconciliation merely repeat the difficulty in a new form. Intelligent people no longer try to account for evil by blaming it all upon a spirit absolutely wicked. The usual attempt at explanation is to say that if God had not permitted some particular evil a greater evil would have occurred; or that the pains and sufferings of life are means of chastisement and moral purification. Even sin itself is regarded as a means of bringing to pass a greater good. But it is obvious that this explanation itself presupposes the limitation of Divine Power; for, if God is perfectly good, He would not tolerate suffering and sin, unless they could not be avoided; and since He does tolerate them, they must be unavoidable; that is to say, that even God Himself can not banish all evil from his universe. It is customary today to say that God's world is not perfect, but that perfection will come at the end of the evolutionary process. But the idea of evolution, the very notion of a process, is irreconcilable with the thought of omnipotence. For a process implies hindrance or retardation, and therefore the finiteness of the energizing agent.

2. Righteousness versus Predestination:- This is, of course, only a special and aggravated case of the preceding difficulty. By righteousness we mean the goodness of God in relation to human sin; and by predestination, his omnipotence in the form of sovereignty over natural events, and, especially over the actions and the lot of men. The belief in fate is

wellnigh universal. When an accident happens or a death oc-
curs, people, say "It was to be". And, rather strangely,
they find this a conforting thought. But there is the ob-
vious difficulty that if all events, including human actions,
bad as well as good, are foreordained by God, then God becomes
responsible for human sin. Calvin, following Augustine, at-
tempted to avoid this inference by distinguishing between the
act and the intention. A son might murder his father or an
assassin might kill a king, and the act was in accordance with
the sovereign will of God. But the miscreant did not intend
to serve God. His intention was evil, and the sin of the act
lay not in the act itself, but in the intention. It is easy
to see, however that this is simply an evasion of the diffi-
culty. The same motive (leaving out of consideration their
regard for the authority of Scripture) which chiefly influ-
enced Calvin and others, in their adoption of the theory of
predestination, namely, the desire to bring all events under
the sovereignty of God, would logically impel us to hold that
the intentions of men as well as their actions are predes-
tined; since the intention is also a fact, an event in the or-
der of time.

3. The Hearing of Prayer versus Omniscience:- Is is dif-
ficult, if not impossible, to reconcile the practice of pray-
er with belief in predestination. Why should a person ask for
anything, if all events are foreordained, since his asking
will assuredly make no difference? Even with the denial of

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predestination, the difficulty remains. Prayer, in the sense of petition offered in the hope of accomplishing a definite end, must be justified, if at all, in one of three ways. If we think of God after the analogy of an ancient oriental monarch, who was of uncertain morality, we might regard prayer as necessary, in order to propitiate the despot when he is angry, or to overcome his carelessness or lack of interest in the well-being of his subjects. But surely, in the case of a sovereign who is perfectly good, prayer is not needed for this purpose. Again, if God's power were limited, prayer might be needed as a means of supplementing the power of God. It may plausibly be maintained that prayer itself generates a sort of cosmic energy, which reinforces the energy which is lacking for the accomplishment of some good purpose. But, according to the popular idea, there is no defect in power, and prayer can not be justified in this way. Prayer, then, in the sense of petition, could be justified only on the assumption that God knows less about the needs of men than men themselves know. The analogy of the eastern monarch here recurs, and doutless has figured largely in the common theory of prayer. But if God is omniscient, we cannot tell him anything, and the antinomy remains unsolved. We find, accordingly, that the clearer minds among religious people no longer think of prayer as a means of changing the order of nature, or, to use the religious phrase, as a means of altering God's will, but rather as a source of subjective inspiration and purification. If objective benefits are expected at all, they are regarded as

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results effected indirectly by the prayer thru its effect up-
one the one who prays or upon those who know that the prayer
has been offered.

4. Personality versus Immutability:- Popular thought is
crudely anthropomorphic in its conception of God. The common
notion of God is derived from the Hebrew Scriptures, in which
God is spoken of as possessing a hand, an eye, a face, etc.,
and the line between figure of speech and literal statement
is not clearly drawn. Even when these cruder modes of thought
are seen to be metaphorical, God is still said to become ang-
ry, to be sorry, to change His mind, to make covenants with
his people. Now anthropomorphism is not necessarily a bad
thing, and, if it is clearly seen to be merely a mode of speak-
ing, it may be desirable as a method of making the idea of God
a serviceable one. My point here is that all forms of anthrop-
omorphism, including the idea of personality,are irreconcilable
with the notion of God's immutability. God, as a person, lives
in time, and experiences change; for the notion of a person
above time and change is a meaningless thought. Nevertheless,
in religious speech much stress has been laid upon the change-
lessness of God. In him "there is no variableness, neither
shadow of turning", and traditional religious thought has not
been content to restrict the notion of immutability to the
changelessness of the character, or the purpose of God, but has
applied it also to the thory of His relation to the world. But
the world is in time, and is subject to change, and he who would

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know and control the world must also enter into the life of time and change. No reasoning can bridge the chasm. All attempts to do so are merely examples of special pleading.

Yet in spite of these antinomies, most of them rather evident, the traditional notion of God retains its place, in some measure at least, in the popular mind. God is thought of as omnipotent, omniscient, immutable, and, at the same time, as a personal being who is perfectly good, and who enters into communion with men and may be influenced by their petitions. A prevalent incapacity for accurate and logical thinking, where one's own interests and wishes are involved, is probably the fundamental explanation of the possibility of the continuance of conceptions so self-contradictory. The influence of early training and example are, of course, potent forces in maintaining traditional modes of thought. Dependence on the authority of the Church and the Bible, together with some sympathy with the experiences, or alleged experiences, of the mystic, are, no doubt, also contributory influences. But there is, in addition, a strange delight in the unintelligible and mysterious for its own sake. It is proverbial that the common mind mistakes obscurity for profoundity, delights in mysteries, and reverences the unknown and the unknowable.

CHAPTER III.
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THE MONISTIC ABSOLUTE AS THE PHILOSOPHIC EQUIVALENT OF GOD.

In our attempt to find a conception of God that is both
rationally satisfactory and religiously serviceable we
turn to the philosophers. Two types of theory may be dis-
tinguished: the monistic and the pluralistic. According to
the monistic theories, God is the whole of existence; plural-
istic theories, on the other hand, make God the part, but the
controlling part of existence.

1. Monistic Idealism as a Fulfilment of Traditional Theology.
In this chapter we shall consider the monistic revision of the
traditional conception of God. The theory of Josiah Royce may
be taken as a typical expression of this class of theories.[1]

Royce's conception of God is regarded by its author, "not
as destroying, but as fulfilling the large collection of slow-
ly evolving notions that have appeared in the course of histo-
ry in connection with the name of God."[2]   He insists that
"what the faith of our fathers has genuinely meant by God, is,
despite all the blindness and all the unessential accidents
of religious tradition, identical with the inevitable outcome

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[1] For Royce's account of his philosophic ancestry, see The
Religious Aspect of Philosophy, pp. IX ff.

[2] Royce et al., The Conception of God, p. 48

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of a reflective philosophy."[1] This conception "undertakes to
be distinctly theistic, and not pantheistic. It is not the
conception of an Unconscious Reality, into which finite beings
are absorbed; nor of a Universal Substance, in whose law our
ethical independence is lost; nor of an Ineffable Mystery,
which we can only silently adore.   On the contrary, every eth-
ical predicate that the highest religious faith of the past has
attributed to God is capable of exact interpretation in terms
of our present view."[2]

Professor Royce's contribution to the ~~theistic~~ discussion
consists, then, in the identification of God with the Absolute
of idealistic philosophy; and in attempting so to define the
Absolute as, on the one hand, to avoid the self-contradictions
which are to be found in the notion of Deity as ordinarily con-
ceived, and, on the other hand, to enrich the notion of the Ab-
solute so that it shall be a fit object for the religious emo-
tions or attitudes of awe and reverence,of faith, loyalty and
love. It is important to remember, however, that many idealis-
tic philosophers have not been willing to regard the Absolute
as personal, or in any significant sense as a self. Thus Mr.
F. H. Bradley does not apply the name God to the Absolute,[3] and,
if Dr. McTaggart is right, Hegel himself, who is commonly re-

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[1] Royce et al., The Conception of God, p. 50; see also The
Problem of Christianity, Preface.

[2] Ibid., p. 49

[3] Appearance and Reality, pp. 446 ff.

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garded as the father of this general way of thinking, ought
not to have done so.[1] His use of "God" and of other religious
terms, says McTaggart, was merely an accommodation to the "cur-
rent mythology" of the time. According to Professor Royce,
however, the Absolute of monistic idealism is what the Church
has really meant all along by God; but this meaning has been
only vaguely apprehended, and therefore only imperfectly ex-
pressed.

As defined by Royce, God, or the Absolute, includes in his
own consciousness and will the content of all finite minds.
The individual self is an identical part of the Divine Self.[2]

"Let us sum up, in a few words", says Royce, "our whole ar-
gument. There is, for us as we are, experience. Our thought
undertakes the interpretation of this experience. Every intel-
ligent interpretation of an experience involves, however, the
appeal from this experienced fragment to some more organized
whole of experience in whose unity this fragment is conceived
as finding its organic place."[3] "There must be an experience
to which is present the.....actual limitation and narrowness
of all finite experience."[4]

Furthermore, since every reality exists "just in so far
as there is experience of its existence,"[5] since, in other words

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(1) Studies in Hegelian Cosmology, pp. 59ff., 213.

(2) The Conception of God, p. XIII. cf. Hilbert Journal 1,44.

(3) Ibid., p. 42

(4) Ibid., p. 41 cf. The Religious Aspect of Philosophy, p.441.

(5) The Conception of God, p. 43

everything that is, is the content of mind, it follows that the 'things' which we ordinarily think of as non-mental are included in the content of the Absolute Self.

"The reality that we seek to know", says Royce, "has always to be defined as that which either is or would be present to a sort of experience which we ideally define as an organized-- that is, a united and transparently reasonable experience. We have, in point of fact, no conception of reality capable of definition except this one".[1] To assert that there is any absolutely real fact indicated by our experience, is to regard this reality as presented to an absolutely organized experience, in which every fragment finds its place."[2]

Professor Royce's conception of the Absolute is attained, then, by combining the traditional attribute of omniscience with the idealistic presupposition that to be is to be known as being. It may be remarked in passing that if this presupposition is denied, the whole edifice of monistic idealism falls to the ground. We are not now concerned, however, with the question of the existence of the Absolute, but only with its definition. If the presupposition is granted, it is evident that, as Royce maintains, "In order to have the attribute of Omniscience, a being would necessarily be conceived as essentially world-possessing."[3]

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[1] The Conception of God, p. 30.

[2] Ibid., p. 42

[3] Ibid., p. 13   21

The error and suffering and sin of our finite lives are all due to the fragmentariness of our experiences. When taken up into the infinite completeness of the Universal Self, all the imperfecti ns of existence cancel out, or better, all are required to constitute the perfection of the Whole. We, as fragments of the Absolute, may be victims of misfortune, unhappy, discontented, sinful. But the Absolute is perfectly good. Our imperfection, and our thought of the world as imperfect, are the conse uence of the limitation of our knowledge. We know in part; the Absolute knows the Whole, and pronounces it complete, and perfectly good.[1]

"Misfortune comes to us, and we ask: What means this horror of my fragmentary experience?-- Why did this happen to me? The question involves the idea of an experience that, if present, would answer the question. Now such an experience, if it were present to us, would be an experience of a certain passing thru pain to peace,.... of a certain far more exceeding weight of glory that would give even the fragmentary horror its place in an experience of triumph and f self-possession. In brief, every time we are weak, downcast, horror-stricken, alone with our sin, the victims of evil fortune or of our own baseness, we stand, as we all know, not only in the presence of agonizing fragmentary experiences, but in presence of besetting problems, which in fact constitute the very heart of our calamity........ Well, then,-- if the divorce of idea and experience characterizes every form of human consciousness of fini-

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1. The Religious Aspect of Philosophy, p .444 and 449.
   Sources of Religious Insight, p. 224

tude, of weakness, of evil, of sin, or despair,-- you see that Omniscience, involving, by definition, the complete and final fulfilment of idea in experience, the unity of thought and act, the illumination of feeling by comprehension, would be an attribute implying for the being who possessed it, much more than a universally clear but absolutely passionless insight. An Omniscient Being could answer your bitter **Why?** when you mourn, with an experience that would not simply ignore your passion. For your passion, too, is a fact. It is experienced. The experience of the Omniscient Being would include it. Only his insight, unlike yours, would comprehend it, and so would answer whatever is rational about your present question...... In order to have the attribute of **Omniscience**, a being would necessarily.....be conceived as omnipotent, and also as in possession of just such experience as ideally ought to be; in other words, as good and perfect."[1]

2. Some Difficulties of Monistic Idealism.- As has already been remarked, Professor Royce's proof that there _is_ such an Absolute Being as he has defined, rests upon the presupposition that all being is _being known,_ that all existence is mental. Unless this assumption be granted, the argument goes to pieces. Moreover, in Chapter VI. we shall meet a consideration which will make it impossible for us to conceive that the Absolute Self is real. This is the self-contradiction involved in the notion of a "realized infinite." For the present, however,

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[1] The Conception of God, pp. 11ff.

I shall limit myself to pointing out certain other difficul-
ties, which as it seems to me, are inseparable from the concep-
tion of the Absolute as it is defined by Royce.

(a) The first of these may be called the religious dif-
ficulty. We may approach it by considering a conception near
akin to that of the monistic Absolute, namely, the conception
of God as immanent in his world.   In their attempt to reconcile
a belief in the Supernatural with the generally accepted re-
sults of natural science, "liberal" theologians emphasize the
immanence of God.   If God is thought of as transcendent, and
the supernatural and the natural regarded as mutually exclusive
categories, then the friend of religion must view the progress
of science with alarm. A division of the world between science
and religion, between Nature and God, might be reasonably satis-
factory, if one could be sure that the boundary would remain
permanently fixed . But, if we define the natural as that which
is explicable in terms of scientific law, then, as science ex-
tends its territory, and proclaims its belief in the possibili-
ty of a universal conquest, the outlook for religion becomes
dark indeed. If the supernatural is defined as that which is
not natural, the scientific view of the world leaves no place
for God.

In this perilous situation "liberal" theologians have em-
phasized the immanence of God, and have said that all events
are supernatural, since all are produced by or are particular
expressions of the immanent God. The difficulty of this proced-
ure is,however that in thus preserving the right to use the

word God, we are in danger of so impoverishing the idea of
God that it becomes of little value as a religious conception.
In order to meet this peril it is then necessary to insist that
God is transcendent as well as immanent. Thus to avoid the
danger of pantheism, Dr. William Newton Clarke, for example,
maintains that "Transcendence is first,....It is the transcend-
ence that gives the immanence its meaning..... The Christian
thought of God is not so much that the immanent God is trans-
cendent, as it is that the transcendent God is immanent."[1]
The God who is immanent is the Personal God.

The difficulty, however, is to see how a completely imman-
ent God _can_ be personal or transcendent. Merely to _say_ that
God is immanent, and that therefore all events are acts of
God, and that for this reason the theist need not be troubled
by the claim of science to include all events in its realm; and
also to _say_ that God is transcendent and personal as well as
immanent does not solve the difficulty; any more than to _say_
that a certain geometrical figure is round and also has four
right angles will remove the self-contradiction from the notion
of a s uare circle. In the same way, for Royce merely to say
that the Absolute is Personal, and that his theory is a theism
and not a pantheism does not suffice. Unless we assume that
completeness, as opposed to fragmentariness, is _per_ _se_ worthy
of reverence, an assumption which is by no means self-evident,
there seems to be no sufficient reason for worshipping the

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[1] The Christian Doctrine of God, p. 322.

Absolute;[1] and it seems impossible for us to enter into fellow-
ship with such an entity, unless we consciously or unconscious-
ly think of it as if it were a Person distinct from, and
standing over against us and all others.

(b) Furthermore, there are certain psychological diffi-
culties in the conception of the Absolute. These result from
the circumstance that some of our experiences, which are by
definition experiences of the Absolute also, are conditioned
by our very finiteness, and therefore can not be experienced
by an Absolute being. Such experiences are hope and fear, for
example. A being who knows perfectly what the morrow will bring
forth can not hope for anything on the morrow; neither can he
fear. If I am sure of obtaining a certain boon, I do not hope
to obtain it; still less can I be said to fear lest I shall not
obtain it. Both of these emotions presuppose some degree of
uncertainty with reference to the future, and such uncertainty
is incompatible with omniscience. In the same way it is impos-
sible that an omniscient being should ever experience curiosity
or the joy of discovery. The Absolute, too, must be without
the experience of sin and repentance. Yet, as Absolute, he must
contain all these experiences.

If all we mean when we say that a being is omniscient is
that he knows about all the experiences of all other beings
(in addition to all the other knowledge that he is assumed to
possess), then these difficulties do not arise. The Absolute

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[1] See Professor Mezes' criticism of Royce's Ultimate Being,
The Conception of God, pp. 54 ff.

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may well enough be assumed to know all about my states of mind;
but he can not, without contradiction, be assumed to include
in the totality of his experience the identical hopes and fears
and feelings of repentance that I feel.

The same remark must be made of our experience of temporal
succession. God, or the Absolute, is said to know all in an
Eternal Now.[1] But if that is the nature of his knowledge, it
is impossible that He should know things in succession. It
must be admitted, however, that both kinds of knowledge are at-
tributed to him. It is common to make a distinction between
a holy place in which a real experience of succession is found,
and a Holy of Holies in which all "bondage to succession" is
overcome. Thus the late Professor Bowne, altho he criticizes
the absolute idealism of the Hegelian school on the ground
that "such a system excludes all movement and progress, and
the appearance of movement can only be reckoned a delusion",
insists nevertheless that "from the theistic standpoint the
infinite must be viewed as possessing an eternal mind so far
as itself is concerned." On the other hand, "the infinite
must be in time, so far as the world process is concerned."[2]

Dr. William Newton Clarke writes in a similar strain;
"Succession is essential to the significance of events in time,
and if God had no knowledge of it he could not understand
events or the history that is composed of them, or the life of
his children. He has both kinds of knowledge.   He eternally

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[1] The Religious Aspect of Philosophy, p. 441; The Conception
of God, pp. 59 f. The World and the Individual, II.,138 ff.
[2] Metaphysics, pp. 480, 340f.

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knows all things at once, and is also aware of them as they become realized in time and space; and in the perfect mind there is no inconsistency between these two modes."[1]

But does this last clause mean anything more than that contradictions may be tolerated in the case of affirmations concerning the perfect mind, which would be intolerable if the mind were not perfect? And why this reluctance to subject the perfect mind to the "bondage of succession"? We may say, if we will, that God would be limited by succession, but is he not limited in just the same sense by the law of contradiction and the law of love? The attempt to affirm the reality of both kinds of knowledge in the Divine mind **suggests**, once more, the attempt to define a plane figure that is both square and circular.

This view can be logically defended in no other way than by a denial of the reality of the experience of time. Says Professor Mezes, interpreting the view of Royce, "Speaking technically, time is no reality; things <u>seem</u> past and future, and in a sense, non-existent to us, but in fact they are just as genuinely real as the present is. Is Julius Caesar dead and turned to clay? No doubt he is. But in reality he is also alive, he is conquering Spain, Gaul, Greece, Egypt. He is leading the Roman legions into Britain, and dominating the envious Senate, just as truly as he is dead and turned to clay,--

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[1] <u>The Christian Doctrine of God</u>, p. 346; cf. pp. 295 ff.

just as truly as you now hear the words I am speaking. Every reality is eternally real; pastness and futurity are merely illusions".[1]

But if the experience of succession is illusory, what then is real? The fact that of two experiences, one comes after the other, is certainly as real as anything can be. If the two experiences are cognitive, it may indeed happen that the events to which they refer really occurred in a different order from that in which I have experienced them; or these events may really have been simultaneous; but the experiencings themselves are in the order in which they come, and it is meaningless to say that they are really in a different order, or that they are simultaneous. If the Absolute were merely supposed to know about them, he might have knowledge of them both at the same moment, altho I experience them one after the other; but if my experiences are numerically the same as certain experiencings of His, then the order in which they occur for me must also be the order in which they occur for Him.

(c) Last and most important of all are the ethical difficulties of the conception of the Absolute. If all thoughts are thoughts of God, and all events are acts of God; then our evil desires and purposes are purposes and desires of God, and all our sinful deeds are deeds of God. The antinomy between predestination and the goodness of God, which has troubled traditional and popular theology, thus appears in an aggravated form in the theology of immanence. The

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(1) Royce, et al. The Conception of God, p. 60.

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logical consequence is a denial of the genuineness of the distinction between good and evil, right and wrong. If the Absolute must be conceived to be "in possession of just such experience as ideally ought to be",[1] then, from the standpoint of the Absolute, there is no reason for wishing that anything should be other than it is; no reason for pronouncing one thing evil and another good.

The fact that the partisans of the monistic Absolute, like believers in the Calvinistic doctrine of predestination, have been zealous in good works, and have been strenuous advocates of reform and good haters of iniquity of all sorts, does not alter the fact that the logical consequence of their creed is a life of resignation and quiescence. If the account which monistic idealism gives of the world is true, not only is it logically right for me to endure my private pains and disappointments without grumbling, and to "spiritualize" and "idealize" them, seeing that the Absolute is not unhappy, and the Absolute is not disappointed, and that in spite of these "partial evils", in the Universe as a whole the good triumphs,[2] but there is no reason why I should bestir myself to lighten the sorrows of my fellow men, since their sorrows, too, just as they are, have their proper place in the eternal felicity of the Absolute and contribute to the perfection of the whole.

It may perhaps be said that, since nothing that we can do can disturb or impair the eternal perfection of the Absolute,

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(1) The Conception of God, p. 13.

(2) Religious Aspect of Philosophy, pp. 454f; Sources of
     Religious Insight, pp. 237, 224.

we may still without lack of logical consistency, and without
defect of loyalty to the good of the Whole, attempt to bright-
en the little corner in which we are placed. But if the pres-
ent proportion of light and shadow is just the correct one
to produce the perfection of the Whole, then, assuming the
Whole to remain perfect, in brightening my corner, I should
automatically darken some other corner; and there is no suffi-
cient reason for wanting to do that. If on the other hand,
it should be said that the precise proportion of light and
shade in the universe is a matter of indifference, and that
consequently I can seek my own happiness and that of others
without necessarily diminishing the felicity of the Absolute,
or of any sentient being, then we should have to conclude that
the doctrine of the Absolute is without any moral significance
whatever; for, if my pains and sorrows are not necessary to
the felicity of the Absolute, the doctrine of the Absolute pro-
vides no reason why I should bear them patiently.

The monistic idealist is sure to object at this point
that the argument of the last few paragraphs is based upon an
inadequate account of Royce's ethical theory. For Professor
Royce speaks not only of evils which are to be endured, but
also, and much more, of evils which are to be overcome; and,
in his theory, the typical evil is not physical pain, or mere
pain of any kind, but rather the bad will of a moral agent.

This objection of the monistic idealist, however, intro-
duces considerations which had better be postponed until we
have given an account of the ethical argument for theological
finitism.

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CHAPTER IV
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THE DOCTRINE OF A FINITE GOD

The monistic theories make a grudging admission of the individual and particular facts of life. The pluralistic theories, on the other hand, emphasize these facts and take their departure from them. For the pluralistic theories the particular and the individual constitute the true reality. The dirt and grime of actual experience must not be forgotten or ignored in the thought of an Eternal Reality which is supposed, in some mysterious or very imperfectly understood manner, to be perfect, tho including imperfection. Sin and suffering are not illusions which are overcome in an Eternal Now, or fragmentary experiences which together form the perfect Whole of existence. On the contrary, the victory of the Good is not yet achieved; the world is not completed; the process of evolution is a reality. God is not all-powerful; but he is a Struggler, who is hindered and thwarted, at least for the time being, by necessities which are beyond his control. The time process is required for the accomplishment of his good purposes.

In other words, by those who hold the pluralistic view of the world, the tradition that God is Absolute, Infinite, Omnipotent, Omniscient, Immutable, etc., is definitely and consciously abandoned; and, if the belief in God is retained, he is thought of as a finite being, one among many, yet supreme above all.

This, in broad outline, is the doctrine of God expounded by John Stuart Mill, William James, and other philosophical radicals. They were not afraid of unorthodox phraseology; they were not much influenced by the mere form and sound of words. Most theological and religious writers, on the other hand, and many philosophers, manifest a curious reverence for words and phrases that have been hallowed by long use, and a corresponding reluctance to accept new forms of expression. They are, accordingly, disposed to shy at such a word as finite when it is employed as an adjective modifying the term God; and yet many of them are not in principle so far as they seem from the view suggested by the phrase formed of these two words. Thus many monistic idealists have held that suffering must be a genuine experience of the Absolute; and it has become a commonplace of moral and religious exhortation to say that we are co-workers with the Omnipotent. We may question the logical consistency of Absolutist philosophers and religious exhorters, and yet rejoice that, even in opposition to the logical implications of their systems, they have sought to be loyal to the facts of human experience.

In the sixth chapter we shall consider the arguments of those who have arrived at a finitist theology by a logical analysis of the notion of the realized infinite. These thinkers have come to the conclusion that it is impossible without logical inconsistency to say that anything that is, is infinite. Therefore neither God nor the world can be said, if we speak strictly, to be infinite. In this and the immediately follow-

ing chapter, we shall restrict our attention to what may be called the ethical argument for the doctrine that God is finite.

This argument is essentially a theodicy, an attempt to justify the ways of God to men in view of the manifest evil and imperfection of the world. In brief, the argument is this: God can not be thought to be at once omnipotent and perfectly good. If we say that he is omnipotent, that his sovereignty is complete, that all events that occur are willed by him; then it follows that he is responsible for the actual world, which is partly evil, and, accordingly, that he is not perfectly good. If we begin at the other end, and say that God is perfectly good, then we must deny that he is omnipotent.

John Stuart Mill may be taken as a representative of this general tendency. His religious views find expression in the essays on Nature, the Utility of Religion, and Theism, which are bound together in one volume under the tile "Three Essays on Religion".[1]

His argument rests upon the evident cruelty and reckless-ness of Nature, from which he infers the limited power of the Author of Nature. "Next to the greatness of these cosmic forces, the quality which most forcibly strikes everyone who does not avert his eyes from it, is their perfect and absolute recklessness. They go straight to their end, without regard-ing what or whom they crush on the road.........In sober truth, nearly all the things which men are hanged or imprisoned for doing to one another, are nature's everyday performances.
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(1) See bibliography.

Killing, the most criminal act recognized by human laws, Nature does once to every being that lives.....Nature impales men, breaks them as if on the wheel, casts them to be devoured by wild beasts, burns them to death, crushes them with stones like the first Christian martyr, starves them with hunger, freezes them with cold, poisons them by the quick or slow venom of her exhalations, and has hundred of other hideous deaths in reserve, such as the ingenious cruelty of a Nabis or a Domitian never surpassed. All this, Nature does with the most supercilious disregard of mercy and of justice. ....Next to taking life is taking the means by which we live; and Nature does this,too, on the largest scale and with the most callous indifference. A single hurricane destroys the hopes of a season; a flight of locusts, or an inundation, desolates a district; a trifling chemical change in an edible root, starves a million of people........Everything in short, which the worst men commit either against life or property is perpetrated on a larger scale by natural agents......All which people are accustomed to deprecate as 'disorder' and its consequences, is precisely a counterpart of Nature's ways. Anarchy and the Reign of Terror are overmatched in injustice, ruin, and death, by a hurricane and a pestilence."[1]

The main thesis of the Essay on Nature is that it is "irrational and immoral" to "make the spontaneous course of things

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(1)   Three Essays on Religion, pp. 28ff.

the model" of man's voluntary actions.[1]   The incidental con-
clusion of the essay is the position which has been stated
by way of anticipation, namely, that it is absurd and irration-
al to hold that God is perfectly good and also all-powerful".
The only admissible moral theory of Creation", says Mill, "is
that the Principle of Good cannot at once and altogether sub-
due the powers of evil, either physical or moral......Those
who have been strengthened in goodness by relying on the sympa-
thizing power of a powerful and good Governor of the world,
have, I am satisfied, never really believed that Governor to
be, in the strict sense of the term, omnipotent. They have
always saved his goodness at the expense of his power".[2]   Re-
curring to the same thought in the essay on the Utility of
Religion, Mill contends that "One only form of belief in the
supernatural - one only theory respecting the origin and gov-
ernment of the universe - stands wholly clear both of intel-
lectual contradiction and of moral obliquity. It is that
which, resigning irrevocably the idea of an omnipotent creator,
regards Nature and Life not as the expression thruout of the
moral character and purpose of the Deity, but as the product
of a struggle between contriving goodness and an intractable
material, as was believed by Plato, or a Principle of Evil,

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(1)   Three Essays on Religion, p.64.
(2)   Ibid.,p. 391.

as was the doctrine of the Manichaeans"[1].

Mill shows that all the attempts that are made to escape this conclusion are futile, and tacitly presuppose it. "That much applauded class of authors, the writers on natural theology,........have exhausted the resources of sophistry to make it appear that all the suffering in the world exists to prevent greater---that misery exists, for fear lest there should be misery; a thesis which if ever so well maintained, could only avail to explain and justify the works of limited beings, compelled to labor under conditions independent of their own will; but can have no application to a Creator assumed to be omnipotent, who, if he bends to a supposed necessity, himself makes the necessity which he bends to. If the maker of the world can all that he will, he wills misery, and there is no escape from the conclusion."

If we nevertheless attempt to escape by saying that "the goodness of God does not consist in willing the happiness of his creatures, but their virtue", Mill replies that "If the Creator of mankind willed that they should all be virtuous, his designs are as completely baffled as if he had willed that they should all be happy"[2].

"But, it is said, all these things are for wise and good ends". It may be said that "we do not know what wise reasons the Omniscient may have had for leaving undone things which he had the power to do. It is not perceived that this plea itself implies a limit to Omnipotence. When a thing is obviously good and obviously in accordance with what all the

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(1) Ibid., p. 116.   (2) Ibid., p. 37

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evidences of creation imply to have been the Creator's design, and we say we do not know what good reason he may have had for not doing it, we mean that we do not know to what other, still better object---to what object still more completely in the line of his purposes, he may have seen fit to postpone it. But the necessity of postponing one thing to another belongs only to limited power. Omnipotence could have made the objects compatible. Omnipotence does not need to weigh one consideration against another.......No one purpose imposes necessary limitations on another in the case of a Being not restricted by conditions of possibility".[1]

Therefore "The notion of a providential government by an omnipotent Being for the good of his creatures must be entirely dismissed".[2] If we believe that God is all-powerful and that Nature is his handiwork, our "worship must either be greatly overclouded by doubt, and occasionally quite darkened by it, or the moral sentiments must sink to the low level of the ordinances of Nature; the worshippers must learn to think blind partiality, atrocious cruelty, and reckless injustice, not blemishes in an object of worship, since all these abound to excess in the commonest phenomena of Nature. .....He who comes out with least moral damage from this embarrassment, is probably one who.....confesses to himself that the purposes of Providence are mysterious, that its ways are not our ways, that its justice and goodness are not the

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(1) Ibid, pp. 179f.

(2) Ibid, p. 243.

justice and goodness which we can conceive and which it befits us to practise. When, however, this is the feeling of the believer, the worship of the Deity ceases to be the adoration of abstract moral perfection. It becomes the bowing down to a gigantic image of something not fit for us to imitate. It is the worship of power only".[1]

The very argument which has been chiefly relied upon to prove the existence of God, namely the argument from design, far from establishing his omnipotence, is easily shown to be incompatible with it. "It is not too much to say that every indication of Design in the Kosmos is so much evidence against the Omnipotence of the Designer. For what is means by Design? Contrivance: the adaptation of means to an end. But the necessity of contrivance---the need of employing means---is a consequence of the limitation of power.....Wisdom and contrivance are shown in overcoming difficulties, and there is no room for them in a Being for whom no difficulties exist. The evidences, therefore, of Natural Theology distinctly imply that the author of the Kosmos worked under limitations; that he was obliged to adapt himself to conditions independent of his will, and to attain his ends by such arrangements as those conditions admitted of."[2]

A creed like this makes human life significant. "A virtuous human being assumes in this theory the exalted character of a fellow-laborer with the Highest, a fellow-combatant in the great strife; contributing his little, which by the aggregation of many

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(1) Ibid., pp. 112f.

(2) Ibid., pp. 176ff.

like himself becomes much, towards that progressive ascend-
ancy, and ultimately complete triumph of good over evil,
which history points to, and which this doctrine teaches us
to regard as planned by the Being to whom we owe all the
benevolent contrivance we behold in Nature".[1]

Mill's position is enthusiastically endorsed by William
James in his volume on "A Pluralistic Universe". "When John
Mill said that the notion of God's omnipotence must be given
up if God is to be kept as a religious object, he was surely
accurately right; yet so prevalent is the lazy monism that
idly haunts the region of God's name, that so simple and
truthful a saying was generally treated as a paradox. God,
it was said, could not be finite. I believe that the only
God worthy of the name must be finite".[2] With all its am-
biguities and inconsistencies, the common conception of God
is at bottom that of a finite Being. The God of David or of
Isaiah, the Heavenly Father of the New Testament, is not the
Absolute. "That God", says James, "is an essentially finite
being in the cosmos, not with the cosmos in him". "The God
of our popular Christianity is but one member of a pluralis-
tic system. He and we stand outside of each other, just as
the devil, the saints, and the angels stand outside of both

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(1) Ibid., p. 117
(2) James, A Pluralistic Universe, p. 124.

of us."[1]

Mill's polemic is directed against the doctrine of omnipotence as held by traditional orthodoxy; that of James is directed against the conception of the Absolute, which has been supposed by its adherents to solve difficulties such as those raised by Mill.[2] "The Absolute", insists James, "taken seriously, and not as a mere name for our right occasionally to drop the strenuous mood and take a moral holiday, introduces all those tremendous irrationalities into the universe which a frankly pluralistic theism escapes, but which have been flung as a reproach at every form of monistic theism or pantheism. It introduces a speculative 'problem of evil' namely, and leaves us wondering why the perfection of the absolute should require just such hideous forms of life as darken the day for our human imaginations. If they were forced upon it by something alien, and to 'overcome' them the absolute had still to keep hold of them, we could understand its feeling of triumph, tho we, so far as we were ourselves among the elements overcome, could acquiesce but sullenly in the resultant situation, and would never just have chosen it as the most rational one conceivable. But the absolute is represented as a being without environment, upon which nothing alien can be forced......Its perfection is represented as the

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(1) Ibid., pp. 110f; see also The Will to Believe, pp. 116 and 134f.

(2) Religious Aspect of Philosophy, p. 455; Sources of Religious Insight, pp. 240ff.

source of things, and yet the first effect of that perfec-
tion is the tremendous imperfection of all finite experience."[1]

To this the partizan of the Absolute will, of course,
object that the imperfection of the finite is a logically in-
dispensable condition of the perfection of the Infinite. And
not only the monistic idealist, but the defender of tradition-
al theology may take this position. Thus St. Augustine long
ago taught that evil does not disturb the order and beauty of
the universe; for "as a painting with dark colors rightly dis-
tributed is beautiful, so also is the sum of things beautiful
for him who has power to view them all at one glance, notwith-
standing the presence of sin, altho, when considered separate-
ly, their beauty is marred by the deformity of sin. God would
not have created those angels and men of whom he knew before-
hand that they would be wicked, if he had not also known how
they would subserve the ends of goodness". "The whole world
thus consists, like a beautiful song, of oppositions".[2] Or,
to employ an illustration of the Platonic-Augustinian doctrine
which is repeated by Royce, "As one looking over the surface
of a statue with a microscope, and finding nothing but a
stony surface, might say, how ugly! but on seeing the whole
at a glance would know its beauty; even so one seeing the
world by bits fancies it evil, but would know it to be good
if he saw it as a whole. And the seeming but unreal evil of
the parts may be necessary in order that the real whole

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(1) A Pluralistic Universe, p. 117.
(2) Ueberweg, Geschichte der Philosophie, 161f.

should be good."[1]

This, however, is not precisely the view of Royce him-
self. He is not content to say that the evil must exist to
set the good off by way of constrast. He maintains that the
"evil will is a conquered element in the good will; and as
such is necessary to goodness". "Goodness....has as its ele-
ments the evil impulse and its correction. The evil will as
such may be conquered in our personal experience, and then
we are ourselves good; or it may be conquered, not in our
thought considered as a separate thought, but in the total
thought to which ours is so related, as our single evil and
good thoughts are related to the whole of us.....As the evil
impulse is to the good man, so is the evil will or the wicked
man to the life of God, in which he is an element".[2]

The doctrine which we have found in the earliest of
Professor Royce's books is found also in those which appeared
shortly before the end of his life. Thus in The Sources of
Religious Insight he writes of evils "which cannot, yes, which
in principle, and even by omnipotence, could not, be simply
removed from existence without abolishing the conditions which
are logically necessary to the very highest that we know. Life
in the spirit simply presupposes the conditions that these
ills exemplify......Such sorrows, such idealized evils, which
are so interwoven with good that if the precious grief were

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(1)   Religious Aspects of Philosophy, p. 265.

(2)   Ibid.,   pp. 455f.

wholly removed from existence, the courage, the fidelity, the spiritual self-possession, the peace thru, in, and beyond tribulation which such trials alone make possible, would also be removed, surely show us that the abstract principle: 'Evil ought to be abolished', is false."[1]

Royce holds that a world like the one we know, which contains courage, fidelity, etc., and the evils and possible evils which make these noble human qualities possible, is ethically preferable to a world which would contain no evil and therefore none of the virtues which presuppose it. For him the ideally perfect whole is not composed of none but perfect parts. On the contrary the imperfection of some of the parts is a logical condition of the complete perfection of the whole. To such reasonings, James replies, that "The ideally perfect whole is certainly that whole of which the parts also are perfect - if we can depend on logic for anything, we can depend on it for that definition."[2]

Is, then, a whole that consists of parts all of which are themselves perfect, ethically preferable to a whole, the perfection of which includes some imperfection, and, indeed consists at least in part in the overcoming of imperfection? Here we have the issue between the monistic and the pluralistic ethics in a nut-shell. In the next chapter we shall

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(1) Sources of Religious Insight, pp. 250ff. - See also The Problem of Christianity, I, 308 and elsewhere.

(2) A Pluralistic Universe, p. 123.

consider this issue in so far as it is relevant to the prob-
lem of theodicy. Meanwhile let us briefly inquire concern-
ing the historical relations of theological finitism.

We have seen that Mill recognizes the kinship of the
theology which he regards as alone clear "both of intellec-
tual contradiction and of moral obliquity", with the theories
of Plato and the Manichaeans. Nature and Life are best re-
garded as "the product of a struggle between contriving good-
ness and an intractable material,....or a Principle of Evil".[1]

According to Burnet,[2] Plato held that evil as well as
good must be caused by a soul, whether by one soul or by many.
In his later writings he no longer referred evil to matter,
but held that it, as well as good, must be attributed to soul.
This, however, says Burnet, does not mean that Plato taught
the existence of an evil world soul. He speaks of "one pre-
eminently good soul, namely God, but there is no suggestion
of a preeminently evil soul, and that view is expressly re-
jected in the Statesman."

The dualism of good and evil appears most clearly in the
doctrine of the Manichaeans (followers of Mani or Manichaeus,
who was born 216 A.D., and began his public teaching in 242.)
In each man, according to this doctrine, there are two souls.
Each of these proceeds from a corresponding cosmic principle.

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(1)   Three Essays on Religion, p. 116.
(2)   Greek Philosophy, Part I, p. 334f.

One the bodily soul is derived from the universal principle
of evil; the other, the light-soul, from the good principle,
the realm of light. Just as in the individual man there is
a conflict between the good and the evil soul, so in the uni-
verse as a whole there is a similar conflict.[1]

In Plotinus, evil is pure negativity. "As the absolute
lack, the negation of the One and of Being, it is also the
negation of the good". Accordingly, for the Neo-Platonists,
evil is not itself a positive entity, it is the defect of
the good, it is not-being.[2]

In the doctrine of Augustine, the cause of evil is to
be found in the will of man, "which turns aside from the
higher to the inferior, or in the pride of those angels and
men who turned away from God, who has absolute being, to
themselves, whose being was limited". It is obvious, however,
that, since Augustine regarded men and angels as created beings,
their Creator would seem to be responsible for the wrong
choices and the sinful pride of his creatures. This inference
Augustine seeks to avoid by teaching that the "evil will works
that which is evil, but is not itself moved by any positive
cause; it has no causa efficiens, but only a cause deficiens."
Accordingly, in agreement with the Neo-Platonists, he held
that evil is not a substance or essence, but a marring of

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(1) Ueberweg, Geschichte der Philosophie, 50f.

(2) Ibid., p. 202.

the essence of the good. It is, therefore a "defect", a "priv-
ation", or "loss of the good". This theory he held in oppo-
sition to the Manichaeans, to whose number he had belonged
for a time in his early manhood. In one respect, however, he
never freed himself from dualism; he "maintains the dualism
of good and evil in respect of the end of the world's develop-
ment as decidedly as, in opposing Manichaeanism, he combats
the dualistic doctrine, when applied to the principle of all
being".[1] Thus in his theory of evil, Augustine wavered be-
tween monism and dualism; and such a wavering between monism
and dualism, between Neo-Platonism and Manichaeanism, has
characterized the theology of the Church from his day to the
present. This may explain why it is possible for both James
and Royce to claim to be expounders of the Christian concep-
tion of God.

The modern tendency toward the acceptance of the doctrine
of the divine finitude, may be considered as the logical out-
come of the revolt against the Augustinian or Calvinistic
doctrine of predestination. When confronted with the evils
of the world, - a world which, according to his theory, is
exactly the kind of world that God has willed - the predes-
tinarian, in the effort to preserve the divine righteousness,
is driven to say that the divine righteousness is different
from human righteousness; but human righteousness is the only
righteousness that we know anything about; consequently, in

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(1) Ueberweg, Geschichte der Philosophie, 50f.

so far as divine righteousness is different from human, the
phrase "divine righteousness" is void of meaning.[1] The pre-
destinarian, therefore, is logically unable to escape the
conclusion, that, on his premises, the divine goodness falls
short of the ideal goodness toward which the best men and
women of Christian lands have aspired. The "modern" Christian
begins his theology, not with an affirmation of the universal
sovereignty of God, but with an affirmation of his all-inclus-
ive benevolence. His fundamental doctrine is that God is good.
If, now, a contradiction appears between the conception of
the divine goodness and that of the divine power, he will give
up the latter in order to retain the former.

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(1) Clarke, The Christian Doctrine of God, p. 74.

THEOLOGICAL FINITISM AS THE OUTCOME OF A RATIONAL THEODICY

If the world is conceived in a pluralistic or dualistic
fashion, the case for theological finitism is complete. Mill's
argument is unanswerable. If we think of God as a Person who
stands in moral relations with other persons, then, even if
we assume these others to be his creatures, it is impossible
to hold that he is omnipotent and at the same time perfectly
good. The notion of omnipotence is in itself, logically unob-
jectionable: it is logically possible to hold that the Supreme
Being is omnipotent. But, if he is omnipotent, he is either
malevolent or else non-moral. The Supreme Being might be one
who would take pleasure in the sufferings of his creatures,
only doling out to them sufficient satisfactions to induce
them to continue the business of living; or be might be whol-
ly indifferent to their joys and sorrows. Such a being, how-
ever, would not deserve to be called God; for God, we say,
is good. But if God is good, then he is not omnipotent.

1. The Failure of Monistic Theodicy:- In this section
I propose to show that if we think of the world monistically,
a rational theodicy is impossible. Let us then, for the pres-
ent, ignore the logical and psychological difficulties of
monistic idealism, except as we shall find them to be bound
up with its ethical difficulties. Let us assume the monistic
theory of the world and inquire concerning its treatment of
the problem of evil.

It is one of the merits of Royce's discussion that he insists upon finding a solution that shall be _rational_. He does not demand the right to make mutually contradictory statements about God, on the ground that it is about God that he is speaking. He is not satisfied with saying that in some way that is wholly mysterious to us partial evil may be universal good. The Platonic-Augustinian analogy of the beautiful picture which is composed of dark as well as light colors[1] is not satisfactory to him. It gives us no enlightenment as to why just these particular evils are necessary to make the perfection of the whole. It suggests an ethics of quietism; for it logically implies that the distinction between good and evil is mere appearance and not genuinely valid.

For Royce, then, evil is not merely "an illusion of the partial view;....but...seems in positive crying opposition to all goodness." "We do not say that evil must exist to set the good off by way of contrast.....We say only that the evil will is a conquered element _in_ the good will, and is as such necessary to goodness". "The good act has its existence and life in the transcending of experienced present evil." "Goodness as a moral experience is for us the overcoming of experienced evil; and in the eternal life of God the realization of goodness must have the same sort of organic relation

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(1) See Chapter IV, p. 41.

to evil as it has in us."[1] According to the theory of
monistic idealism, then, evil has its place in the perfect
world. It is the condition of the possibility of the good.
Even the worst conceivable evil, the deed of a traitor, may
be the condition of an atoning deed by which the world is
so re-created and transformed that it is "better than it
would have been had all else remained the same, but had that
deed of treason not been done at all."[2]

Now no one will question the reality and importance of
the experiences and social situations employed to illustrate
the 'overcoming' of evil. Physical pain sweetens and sancti-
fies the life of those who accept it resignedly, and bear it
patiently. One who meets his troubles bravely may thus make
them stepping-stones to a level of character which he could
not otherwise have attained. As we study the record of human
progress, we frequently meet cases in which an act of sin
seems to have been the indispensable condition of great good.
The conception of the 'overcoming' of evil is then undoubted-
ly a conception of great significance. Nevertheless, the
theodicy offered by monistic idealism is not satisfactory.
The monistic theodicy fails for two reasons: (a) It does not
account for all evils; and (b) its account of evil tacitly
presupposes a pluralistic view of the world.

(a) If the only evil were an evil will, and the only

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(1) The Religious Aspects of Philosophy, pp. 45off.

(2) The Problem of Christianity, I, 308.

good a good will, then the notion of the 'overcoming' of
evil would be much less unsatisfactory. Let us grant for
the sake of the argument, that the will may be good or evil
in itself, that is to say, without reference to the conse-
quences likely to flow from its choices (a thory which is,
however, very hard to understand.) But, even if we grant
that will may be good or bad per se, there is no reason to
hold that there are no other goods and evils. The enumera-
tion of "goods" is a sort of personal confession of faith.
No ultimate rational ground can be given for calling anything
good or bad. The perception of values is a presupposition
of all reasoning about right or wrong, good or bad. Certainly,
no one will claim that the goodness or badness of will can be
logically demonstrated. And all that I am insisting upon
here is, that, if we recognize good or bad will we are also jus-
tified in speaking of other "goods" and "evils".

One of these other goods is pleasure, and one of these
other evils is pain. Now it is true that in many cases pain
subserves a good purpose, and that the patient endurance of
pain, (and, still more, I should say, the effort to relieve
and destroy it in oneself and in others) evokes some of the
most admirable human qualities; but no one has proved that
all pains are productive of sufficient good to justify their
existence, and, as we shall see below this attempted justi-
fication of pain presupposes a non-monistic view of the world.

Another "good" is life, considered apart from its pains
and pleasures. The corresponding "evil" is death, especially

premature death. An earthquake destroys a thousand men; a
child, previously strong and healthy, falls a prey to a con-
tagious disease, in consequence of the ignorance or careless-
ness of its parents and the negligence of the community. If
the life of the person has ceased,   he can not be said to
have been strengthened or ennobled by the misfortune that
has befallen him. If, on the other hand, we assume that the
person is immortal, and that his moral development continues
in spite of what we call death, there is no reason for hold-
ing   that his character has been improved by his unfortunate
experience, or that it was in any sense good for him, that
his entrance into the next world should have been hastened
thru human ignorance and sin. In either case, there is no
reason for believing that the perfection of the Absolute re-
quires the termination of human lives in this manner.

Another "good" is sound intelligence, and the correspond-
ing "evil", insanity. This presents an especially difficult
case for the monistic idealist. The physical life continues,
but all opportunity for moral achievement is cut off. The
evil is surely not overcome in the individual, and there is
no reason for supposing it to be overcome in the Absolute,
unless, indeed, one is willing to hold that mere variety of
content is to be so highly esteemed, that the content of the
perfect Mind must be assumed to include the insane delusions
of these unfortunates. Very similar considerations confront
us when we think of those cases in which men's wills have
been weakened by disease; or in which immature moral agents

are compelled by economic conditions to live in an environment that is conducive to sin.

Now so long as there remains a single evil that can not rationally be supposed to be 'overcome', or even that can not be rationally shown to be overcome, we must conclude that the monistic theodicy has failed. It is, of course, possible to find a great many cases in the life of the race, as also in the experience of the individual moral agent, where evil seems to have been thus overcome. But these cases may be matched with others where just the contrary seems to be true. The "treason" of the sons of Jacob led eventually to the elevation of their brother to the virtual kingship of Egypt, and to the preservation of the whole Israelite clan from famine; but the assassination of Abraham Lincoln led to bitter days in the life of the American people, which, there is reason to believe, might have been shortened or prevented, if the great President had been permitted to live a few years longer. To be sure, we do not know what the course of events would have been, had Lincoln served out his second presidential term; but neither do we know what the course of events would have been, if the brethren of Joseph had never sinned, or if Judas had not betrayed his Lord.

As we look back over our lives, we see temptations overcome and difficulties bravely met and conquered; but what shall we say of the temptations that were not overcome, of the difficulties that were not conquered?

Professor Royce himself speaks of a class of evils that,

so far as we can see, are not overcome. "Pestilence, famine, the cruelties of oppressors, the wrecks of innocent human lives by cruel fortunes - all these seem, for our ordinary estimates, facts that we can in nowise assimilate, justify, or reasonably comprehend.....To such evils, from our human point of view, the principle: 'They ought to be simply driven out of existence', is naturally applicable without limitation." [1]

These evils, then, are not seen to be necessary to the perfection of the universal good. They are not yet "spiritual-ized". But, then, with respect to all such evils, the theodicy is not rational. Unfortunately, philosophy must be written "from our human point of view". So far as these evils are concerned, we are no farther on than were Plotinus or Augus-tine. All we can say, is, that in spite of certain ugly black spots the picture may be beautiful as a whole for a Mind that can behold it thus.

(b) Our second reason for rejecting the monistic theodicy is that it tacitly presupposes a pluralistic view of the world. What can we make of the claim that evil is "fragmentariness"? Is fragmentariness, as such, evil. Then nothing is really good except the Whole; and the contrast of "good" and "bad" is identified with the contrast between the "more inclusive" and the "less inclusive". But why the more inclusive should be regarded as better, and the all-inclusive as best of all, is by no means clear.

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(1) Sources of Religious Insight, p. 233.

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Well, then, does "overcoming" mean more than the mere relation of whole to part? If it is to have any ethical significance, it certainly must mean more than this. Some parts of the Absolute, to wit,good men and good impulses, are "good"; others are "evil"; and this difference is not a difference of size, or of complexity of organization. There is here a genuine difference of character; and therefore if the notion of 'overcoming' is to have any moral significance at all, the evil that is overcome must be not merely a part of the Absolute, but a something other than the Absolute. For this reason James is right in saying that the ideally perfect whole is that whole of which the parts also are perfect.[1] It may not be true that the ideally perfect world, or the ideally perfect group of moral agents, is that world or group, all the parts of which are perfect; but this is true of a whole; for within a whole it is logically impossible for good and evil to come into conflict. Moral 'overcoming' implies a conflict of persons, or at least of numerically distinct forces, tendencies, or impulses; and not merely a contrast of parts with one another or with their whole.

Furthermore, if monistic idealism is not to give us an ethics of quiescence, if the notion of 'overcoming' is to be taken seriously, we must assume the reality of temporal succession. All the illustrations of the overcoming of evil,

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(1) The Pluralistic Universe, p. 123.

the case of the traitor and all cases in which a person is strengthened and ennobled by misfortune, imply the notion of time. If it were possible to assign any meaning at all to the notion of a timeless act, it might be possible to think of an eternal prevention of evil; but not of an eternal overcoming of evil.

2. The Outline of A Finitist Theodicy:- In so far, then, as the conception of 'overcoming' is valid and morally significant, it presupposes a finitist theology. If we no longer try to think of God as all-inclusive, and no longer think of him as omnipotent, then this conception of the logical necessity and practical value of evil is a conception of great importance. But we need not affirm that all evils are necessary for the perfection of the world. We may admit the reality of stern and opaque necessities, which can not be transcended, which are not completely understood, it may be, by the Supreme Person himself.

The theological finitist may say without logical inconsistency that it is better that there should be sin than that no opportunity should be afforded for freedom and personality.

He may say that it is better that the operations of Nature should be uniform, than that Nature, like an over-kind nurse, should be continually stepping in to shield us from the results of ignorance, recklessness, or indolence.

He may say that some of the evils which we endure are the condition of the prevention of greater evils. He may, therefore, without inconsistency, explain much of our physical

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pain as a warning against courses of action that would lead
to greater misery.

He may expatiate upon the educative function of suffer-
ing of every description, and show how its patient endurance,
when it is irremediable, will produce a beautiful and saintly
character.

In short, the theological finitist may take over into
his system of thought all the particular instances of "com-
pensation", but need not attempt to show that the "compensa-
tion" is complete or universal. Many evils exist which ought
to be "simply destroyed"; but God is not strong or wise
enough, and certainly we are not, to destroy them immediately.

"We have found a thought", says Royce in his first phil-
osophical book, that makes this concept of progress not only
inapplicable to the world of the infinite life, but wholly
superfluous". "Progress in this world as a whole is there-
fore simply not needed".[1]

For the theological finitist, on the contrary, the con-
cept of progress, far from being "superfluous", is of immense
significance. He hopes for and believes in the possibility
of a better world; and, while lamenting the logical incon-
sistency of his monistic brother, works by the side of the latter
in the effort to hasten the coming of this better world.

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(1) The Religious Aspect of Philosophy, pp. 464, 466.

LOGICAL FINITISM AND THE IDEA OF GOD

In the last chapter we considered the doctrine of a
"finite" God as the outcome of a rational theodicy. In our
third and fourth Chapters, too, ethical considerations were
chiefly stressed; altho we also saw that there are certain
logical and psychological objections to the conception of the
Absolute, - objections which, it seems to me, would be decis-
ive, even if there were no others. The doctrine to which we
were led in the preceding chapters may, accordingly, be
called ethical finitism. Our principal reason for insisting
upon the limitation of God's power and knowledge is the con-
viction that it is logically impossible for the Creator and
Ruler of the world to be perfectly good and also omnipotent
and omniscient. In the present chapter I wish to discuss the
arguments of a school of thinkers who have advocated a finit-
ist view of the world on purely logical grounds. To distin-
guish their doctrine from that which has already been dis-
cussed, we may then speak of it as logical finitism. It is
not a specifically theological doctrine, but it has definite
theological implications.

The founder of the school was Charles Renouvier (1815-
1903) who is said by James to have been the "strongest phil-
osopher of France in the second half of the nineteenth century."[1]
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(1) Problems of Philosophy, p. 165. This, the last book of
     William James, is dedicated "to the great Renouvier's
     memory".

As important disciples, we may name F. Pillon, F. Evellin and
E. Boutroux. Henri Bergson, France's most eminent living phil-
osopher, has been greatly influenced by Renouvier, but it
would be scarcely just to call him a disciple.[1]

Renouvier calls his system "Neocriticism". Windelband
characterizes Neocriticism as a synthesis of Kant and Comte.
However, while Renouvier was greatly influenced by Comte, he
always emphasized the difference between his philosophy and
Positivism.   Positivism begins with a discussion of the nat-
ural sciences and of the implications of scientific method,
and is led to a rejection of the notions of being-in-itself
and transitive cause.   Neocriticism reaches a similar conclu-
sion by a different road. It "begins with the logical inves-
tigation of mental phenomena.....and completes the Humian
critique of the concepts of substance and causality by means
of an apriorism related to that of Kant; in mental phenomena
we have to seek 'essentially' the laws of all being. Thus Neo-
criticism is indeed Phenomenalism, but not Empiricism".[2]

1. The Finitist View of the World:- According to the
first of the Kantian antinomies, it can be proved that the
world has a beginning in time and limits in space; and it can
be proved with equal cogency that it has no beginning and no
limits. The second antinomy affirms that every compound sub-
stance consists of simple, that is indivisible, parts; and also

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(1) Thilly, History of Philosophy, pp. 511f.

(2) Windelband, Lehrbuch der Geschichte der Philosophie, S.515;
     Feigel, Der Französische   Neokriticismus, S. 9.

that there is nothing simple, but that everything is infinitely
divisible. The third and fourth antinomies treat in the same
way the issue of causality _versus_ freedom, and the question of
the existence of an absolutely necessary Being.[1]

There are certain rather obvious weaknesses or oversights
in the demonstration.[2] Yet it is possible so to revise Kant's
arguments as to make them much more cogent.[3] If the demonstra-
tion of both thesis and antithesis, in the case of each or only
of some of these examples of the conflict of reason with it-
self, be regarded as valid, the natural outcome might seem to
be a thoro-going scepticism, an utter despair of the possibil-
ity of attaining the right to be certain about anything. For
if the human reason thus falls into necessary self-contradic-
tion, what ground have we for trusting it even in those cases
in which no contradiction is discoverable? Such a complete
scepticism, however, is _practically_ impossible; and, according-
ly, it is more common for those who hold that both the theses
and the antitheses are valid to argue that the existence of
these antinomies constitutes a reason for the subordination of

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(1) Kant, _Kritik der Reinen Vernunft_, A, 426-461 (Mueller,
     pp. 544ff.)

(2) For a brief discussion of the proof of the thesis of the
     first antinomy, see p. _111_ of this dissertation.

(3) See Renouvier, _Critique de la Doctrine de Kant_, pp. 29ff;
     cf. _Les Dilemmes de Metaphysque _ure._

the human reason to the authority of the Church or the Bible.
From these necessary conflicts they conclude that human reason
has its limits, that we are not always safe in refusing to
believe some propositions, even tho they appear to us to be
logically absurd or self-contradictory. Difficulties and even
self-contradictions may be found in the historic creeds, if we
look for them; but the same is true of some of the most commonly received conceptions, such as the notions of space and time.
Therefore, these thinkers argue, we are justified in believing
"mysteries", that is to say, in holding to the truth of propositions that are logically inconceivable.[1]

In one of his earliest philosophical works,[2] Le Manuel
de Philosophie moderne, Charles Renouvier himself had thought
it possible to believe both the theses and the antitheses of

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(1)   See Hansel, The Limits of Religious Thought; Newman,
      The Grammar of Assent; Hamilton, Lectures on Metaphysics.

(2)   The most important of the works of Renouvier are as follows:
      Manuel de Philosophie moderne (1842); Manuel de Philosophie
      ancienne (1844); Les Essais de Critique Générale, (Le
      Première Essai, 1854;Le Deuxième Essai, 1859); Les Principes de la Nature (1864); Nouvelle Monadologie (1899);
      Le Personalisme (1902); Derniers Entretiens (1905). A
      second and enlarged edition of the first of the Essais de
      Critique générale is called Traité de Logique générale;
      and a similar edition of the second, Traité de psychologie
      générale. In 1867 Renouvier began the publication of a
      philosophical annual, which he called L'Année Philosophique.
      Francois Pillon became his collaborator. This publication,
      however, lived only two years. In 1872 he founded La
      Critique Philosophique. In 1890, this journal was superseded by the revived Année Philosophique. See Arnal,
      Philosophie Religieuse de Charles Renouvier; Feigel,
      Der Französische Neokriticismus.

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these antinomies.[1] But Les Essais de Critique générale began
a polemic against this position;[2] and, in his mature phil-
osophy, logical conceivability, that is to say, freedom from
self-contradiction, became the criterion, not only of all
valid thinking, but also of real existence. Thus it is a
cardinal principle of the neo-criticist school that one of
the two sides of each of the mathematical antinomies must be
false. There is no meaning in saying that both are true. As
Evellin puts it, "To say yes and no of the same thing at the
same time and under the same point of view, this is contra-
diction; and for the understanding contradiction is death."[3]

Accordingly the neo-criticists recognize the principle
of contradiction as the fundamental principle of thought.
Moreover, they refuse to exempt any topic of discussion what-
ever from the sway of this principle. You can't appeal to
it in order to demolish the theories of other people, and
then refuse to admit its universal validity when it threatens
to demolish some pet theory of your own. This principle,
they insist, is essential, not only to human intelligence,
but to intelligence as such. You may speak if you will of
an intelligence that is higher than human; but, unless the

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(1) Arnal, Philosophie Religieuse de Charles Renouvier, p.29.

(2) Ibid., p. 35.

(3) Evellin, Infini et Quantité, p. 19. Cf. Renouvier,
     Les Dilemmes de la Metaphysique Pure, pp. 2f.

principle of contradiction is a principle of this higher in-
telligence also, the phrase "higher intelligence" is a phrase
without meaning. Or, if you say that you believe in "truths
above reason", which on the plane of human reason take the
form of self-contradictory propositions, they will tell you
that you are the dupe of words. Each of the words of a self-
contradictory proposition may indeed have a perfectly clear
and definite meaning when taken separately, but the combina-
tion has no meaning, and the so-called proposition is, strict-
ly speaking, no proposition at all, but merely a succession
of words. You may believe that you believe it; but in real-
ity you do not believe it, for it is neither true nor false
but meaningless.

The principle of contradiction is thus the corner-stone
of the Renouvierist philosophy. Next in importance, and,
as Renouvier and his disciples maintain, a necessary conse-
quence of it, is the "principle of number". This is the prin-
ciple that an <u>infinite number</u> is a self-contradictory notion,
and that there can therefore be no <u>actual infinite</u>. Again
and again in his voluminous writings[1] Renouvier recurs to
this point, and seeks to establish, or rather to illustrate,
it in various ways, but especially by an examination of the
properties of the series of cardinal numbers. A typical il-
lustration of the absurdity of supposing that an infinite num-
ber may actually be given is borrowed from the writings of

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(1) See Les Dilemmes de la Métaphysique Pure, pp. 122-5;
     Nouvelle Monadologie, p. 35; Logique Générale, I. pp.46f.,
     57, and elsewhere.

Galileo. It runs as follows:

"Suppose the series of natural numbers to be given. We
can then form another sequence composed exclusively of the
squares of the first, for it is always possible to find the
square of a number. Thus, by hypothesis, the second sequence
will have a number of terms equal to the number of terms of
the first. Now the first contains all the numbers, squares
as well as not-squares. The second contains only the squares.
The first has, therefore, a number of terms greater than that
of the second, since, containing all the numbers, it contains
all the squares, and it contains besides the numbers that
are not squares. But, by hypothesis or construction, these
numbers of terms are equal. Therefore, there are some equal
numbers of which one is greater than another. But this con-
sequence is absurd. Therefore, it is absurd to suppose the
natural series of numbers to be actually given."[1]

If the natural series of numbers were given, it would of
course be an actually infinite multitude, and the number of
all the cardinal numbers would be an infinite number. Now we
have seen that it is absurd to suppose that the entire series
of cardinal numbers is given, and what is true of the series
of numbers is obviously true of every infinite series. There-
fore the notion of an infinite number is absurd. Renouvier
puts the case somewhat differently in the Critique Philoso-
phique. (Tome XIX, p. 269.) In this argument he assumes

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(1) Renouvier, Les Principes de la Nature, p. 57. - Cf. Année
     Philosophique, 1890, p.83.

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the notion of an infinite number, and then inquires whether it may be supposed to have the properties which all numbers are supposed to possess:

"The infinite number, if one calls it a number, is even or not even, prime or not prime, and moreover should exclude at the same time both these suppositions; and it ought to have its square, its cube, etc., and consequently not be the greatest possible number. It is a heaping up of palpable absurdities."[1]

It is then easy to see which horn of the dilemma will be chosen by the neo-criticist when he is confronted by one of the Kantian antinomies. For the antitheses of Kant's mathematical antinomies assume that the infinite is given, that there can be an infinite number. Therefore, the two antitheses must be rejected, and the theses retained. Says M. Evellin, "It may be affirmed that both in the thesis and in the antithesis Kant is right according to the point of view at which he places himself. It is certain that the pure reason constructs the two theses, the imagination the two antitheses".[2] But as Evellin subordinates imagination to reason, this is only another way of saying that the antitheses are not logically valid.

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(1) <u>Année philosophique</u>, 1890, p. 35.

(2) <u>Infini et quantité</u>, p. 216. Cf. Renouvier, <u>Les Dilemmes de la Méta physique pure</u>, p. 12.

The neo-criticists, accordingly, in rejecting the notion of an infinite number, have in principle repudiated the belief in any sort of actual or realized infinite. For every infinite magnitude or assemblage, if actually given, would have an infinite number. For, says Pillon, "A multitude without a number is a word void of meaning." To think is to determine, and to determine a magnitude of any kind is to give it a number. But there is no infinite number; therefore there are no infinite magnitudes.[1]

Here, however, an important distinction is to be made. We should discriminate between the notion of an infinite which is merely potential, and that of an infinite in the absolute sense of the term.

"The first consists in this, that however great or small we assume a given entity to be, and however much we imagine it to be increased by repeated multiplications, there should still be thought to be something greater or smaller. The second infinite consists in this, that a thing has actually and absolutely so much magnitude or smallness that one can not imagine more of it."[2] The first infinite is called by Renouvier and his disciples the indefinite. Now, the indefinite is a clear idea; but of the absolute infinite it is

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(1) Année Philosophique, 1890, p. 90. Renouvier, Logique Génerale, I., 50ff.

(2) L'annéé Philosophique, 1890, p. 56.

psychologically and logically impossible to form any con-
ception.

Descartes, too, distinguished between the infinite and
the indefinite. But he was not consistent in his use of
terms; and his indefinite is not the same as that of the neo-
criticists. His chief concern seems to have been to reserve
the adjective infinite in its strict sense for God alone.
His indefinite is (a) infinite in one aspect, as contrasted
with God who is infinite in all aspects, or (b) it is only
apparently infinite, that is to say, infinite as viewed by
the human understanding. Sometimes in one and sometimes
in the other of these senses, space is said to be infinite
by Descartes, but God alone is absolutely infinite. Thus,
he preserves himself against the charge of pantheism and
maintains a distinction between God and the world.[1]

Now the idea of the indefinite or of potential infinity
is applicable only to that which becomes and not to that
which is. Potential infinity and totality of being are mu-
tually exclusive. This principle necessitates the rejection
of realism.

"It is interesting in this connection", says M. Pillon,
"to remark the relation which exists between infinitism and
realism. The reality of infinite space, of which Descartes
had no doubt, and which is in his thought the reality of the
infinite world, implies for him the reality of numbers and

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(1) L'Année Philosophique, 1890, p. 59f.

of their infinite sequence. The impossibility of infinite
number implies for us the necessary ideality of numbers and
of their endless series; consequently, the necessary ideal-
ity of limitless space and the necessity of a real world
that is finite and distinct from space".[1]   "To sum up, the
illusion of infinite space comes from the spatial sensibil-
ity, which makes us see in space a receptacle actually ca-
pable of including all the possible co-existents; and the
contradiction shows itself in the very words which we have
to use to express this conception: all (tous) the co-exis-
tents which are possible; for, in their quality of possibles,
the number of which can be indefinitely augmented, the co-
existents which space is actually able to include, are not
and can not be a whole (un tout.)"[2]

Space, as Kant had said, is a form of sensibility; but,
says M. Pillon, time is a concept. Space, as a form of the
sensibility, is a continuum, but time is not. We can re-
present time as a continuum only by transforming it into
extension, and thinking of it after the analogy of a straight
line.[3]

"But what would remain of time if one took away from
it continuity? There would remain of it the concept of a

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(1) L'Année Philosophique, 1890, p. 97f.

(2) Ibid, p. 101.

(3) Ibid, p. 135ff.

completely specific relation of things, the concept of this property which phenomena have of producing themselves one after the other."[1]

"Time is an order of successives, of successive reals and of successive possibles". "The continuum is a datum of spatial sensibility that the reason transforms into a discontinuous indefinite in order to escape contradiction;"[2] for "possibles or real successives or co-existents, whatever their number, are discrete and can only be discrete. The transition from an indefinite continuity to a continuum requires the intervention of the spatial sensibility."[3]

Renouvier writes to the same effect:

"Mathematical continuity ought to be excluded from the representations effected in time, as well as in space, and for the same reason. Consequently, all elementary actions are regarded as instantaneous. Beings occupy duration by the relations of these repeated and multiplied actions; and these actions themselves can be understood only in their multiplicity and their relations, as well in one being as between many. It is in this sense that we ought to regard the instants and the intervals as being given only with their syntheses, which are durations. It is necessary to

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(1) L'Année Philosophique, 1890, p. 140.
(2) Ibid, p. 141.
(3) Ibid, p. 140.

add that these durations in their turn are assignable exclusively by the comparison of these, one with another, and by measures........The elementary durations which limit the instantaneous and successive determinations of beings are extremely small compared with those which can fall under our observation."[1]

Thus the school of Renouvier deny the notion of continuity. "The universe is a finite sum of finite beings". Change, therefore, does not imply the notion of transition through an infinite series of intermediate stages. This notion of discontinuity permits belief in uncaused beginnings and free will.[2] "The reasoning of Descartes, of Locke, of Leibnitz, of Clarke, bears testimony to the singular force of the association which unites the idea of a cause to that of a beginning. This force was such in their minds that to establish the logical necessity of efficient causation, they were satisfied with this dilemma: Everything is produced, that is to say caused, either by another thing or by nothing; now nothing, since it has no properties, can not act, produce or cause; therefore, everything is produced or caused by another thing. They did not see that the idea of effect and consequently of cause, was presupposed in the first

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(1) Renouvier, Les Principes de la Nature, p. 46.

(2) Thilly, History of Philosophy, p. 511.

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place. The dilemma amounted to this: Everything is an effect; this effect necessarily has as its cause either nothing or some other thing; now nothing can not be the cause; therefore, it has as its cause some other thing. They did not see that an alternative remained, that is to say, a third proposition, the falsity of which it was necessary to demonstrate; namely, There are somethings which are not produced, which are not caused, which are not effects. In a word, they did not perceive that their perfectly useless dilemma left the question precisely where it found it." [1]

"The idea of cause is not logically contained in that of beginning". There is, therefore, no contradiction in saying that a thing can begin to be without coming necessarily after any other determined thing. To be sure, a thing can not arise ex nihilo or de nihilo; that would assume that nothing was the material out of which the thing grows or is made. But, there is no contradiction in holding that the thing arises post nihil. For this means only that it was the first phenomenon or if not actually the first, was not the effect of any other. [2]

2. The God-Conception of the Logical Finitist:- Not only does the neo-criticist philosophy permit a belief in absolute beginnings, but its view of past time seems to re-

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(1) L'Année Philosophique, 1890, p. 165f.
(2) Ibid., p. 166.

quire this belief. The principle of number, says Renouvier, does not permit us to think of an infinite number of past events. The past is not like the future, an indefinite. At the present moment, or at any arbitrarily assigned past moment, the series is completed. Consequently, Renouvier prefers the hypothesis of creation to that of evolution.

"The hypothesis of the creation of the world by a first act, an origin of phenomena, is more intelligible, it agrees better with our dominant logical ideas than the hypothesis of an infinite series of successive phenomena without any beginning. Now, every sequence of numerable things which are real and distinct forms a given and determined sum........A sum of causes or of successive phenomena considered at any moment whatsoever of time, if they are or have been real and distinct, ought therefore to be a sum given and determined at this moment." [1]

Accordingly, Renouvier would conclude that the notion of a beginningless process of evolution is logically impossible, and upon this reasoning he bases his belief in a personal Creator. One might object that if the Creator is conscious, and if His consciousness is in time, i.e., consists of a succession of conscious states, then the notion of an infinite series of past events reappears, unless indeed we think of God, too, as having had a beginning; and if God

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(1) Renouvier, Le Personalisme, p. 1.

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is thought of as beginning, we might as well suppose the
world to have begun without the intervention of a Creator.

We may conclude, therefore, that while the finitist
philosophy provides an atmosphere favorable to the belief
in a personal God, it does not logically require it. It may
be that in attempting to demonstrate the necessity of a crea-
tion and therefore of the existence of a God, and indeed, of
founding this demonstration upon his "principle of number",
Renouvier was seeking to atone for what may seem to be the
disservice rendered by his system to theology in refuting
the first Cartesian proof of God's existence. At any rate,
logical finitism may be profitably considered as a critique
of this celebrated "proof".   It is, from this point of view,
that the doctrine is presented by Pillon in the Année Phil-
osophique for 1890, in an article entitled, "La Première
Preuve Cartésienne De L'Existence De Dieu Et La Critique De
L'Infini."   In this article from which a number of citations
have already been made, Pillon reminds us that Descartes,
after removing the doubt of his own existence by the help
of the cogito ergo sum, seeks to escape from egoistic ideal-
ism by means of the idea of infinity or perfection. The
truth of our ideas about an external world is inferred from
the existence of God; and the existence of God is inferred
from our possession of the idea of God.

"Among my ideas there is one which represents a God,
sovereign, eternal, infinite, immutable, omniscient and
universal creator of the things which are outside of him."

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This idea, says Descartes, must have a cause; and Descartes assumes that there must be at least as much "reality" in the efficient cause as in its effect. No idea can contain more objective reality than the formal reality of its cause. Now, the only cause adequate to the production of this idea of God, which we find in our minds, is God. Therefore God exists. Therefore the external world is a real world. Such is Descartes' reasoning.

Pillon remarks, that, in assuming the general proposition that the effect can not be superior to the efficient cause, Descartes reveals a failure to make his original doubt as universal as he supposed he had made it.[1] If, with the school of Renouvier, we hold that there may be first beginnings, that is to say, uncaused events, it is evident that there is no necessity for believing that the effect can contain no more "reality" than the cause. For, in so far as the scholastic principle is regarded as demonstrable, it rests upon the assumption that every event must have a cause. The scholastic philosophers reasoned, and after them Descartes, that if the effect contained more reality than the cause, then, assuming that both effect and cause are divisible into parts, some parts of the effect would be uncaused, since the more real being would have the greater number of parts. If, however,

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(1) L'Année Philosophique, 1890, p. 181.

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we assume that there is no necessary connection between the
notion of a beginning and that of an effect, the scholastic
principle assumed by Descartes sinks to the level of a
pseudo-axiom. Accordingly, even if we <u>do</u> possess the idea
of an infinite and perfect being, we are not justified in
arguing from the fact of its possession to the existence of
such a being.

Moreover, says Fillon, Descartes confused the notions
of infinity and perfection. Descartes assumes the synonymity
of the words 'infinite' and 'perfect'. But, 'the idea of
the perfect, which Descartes and after him Malebranche,Fenelon,
Leibniz, all the spiritualist philosophers of the eighteenth
century, as all those of our time, have always confounded with
that of infinity should be rigorously distinguished from it.
This distinction is one of the fundamental theses of the phe-
nomenalist criticism."

"Perfection is a general idea, formed from the ideas
of diverse qualities of an excellence such as we contemplate
with unmixed satisfaction, and to which we judge nothing that
we can imagine of the same order to be preferable. These
qualities are intellectual or moral or even physical: Such
are knowledge, wisdom, justice, goodness, happiness, beauty,
etc. A perfect being is a being in which these qualities
are united", and so fittingly and harmoniously combined that
there is no occasion for "reproach or desire". "The ideas
relative to perfection and those which concern mathematical
magnitude form, in reality, two separate and irreducible

categories." These categories rest upon two kinds of comparison: Comparison of quantity and comparison of estimation or preference.[1]

The notion of perfection is then one which we can make for ourselves. Consequently, we do not need to assume the existence of a perfect being in order to explain the presence of the idea in our minds. The notion of infinity, i.e., of infinity in the absolute sense, we can not make. But, says the neo-criticist, we do not really possess this notion because it is logically contradictory. The causal relation of our notions of infinity is just the opposite of that supposed by Descartes.

"It is not the idea of the real and absolute infinite implanted in our soul by this infinite, which explains the formation of our ideas of potential infinites. It is our ideas of potential infinites drawn from ourselves, which have conducted us by a process logically illegitimate, but psychologically natural, to the idea of the real and absolute infinite. It is the infinites, apparently actual, of the spatial and temporal world that have led us to the divine attributes."[2]

We can not, therefore, have any valid conception of infinity in the absolute sense. The world is finite and God is finite.

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(1) L'Année Philosophique, 1890, pp. 51, 111ff.
(2) Ibid, p. 110.

Descartes declared "that he did not know whether
infinite number is possible or impossible, whether it ex-
ists or does not exist, whether one ought to give it the
name of idea or not. In the very impotence which we ex-
perience of obtaining it, he found a confirmation of his
proof. So far was he removed from thinking that the proof
could be weakened by this impotence, he concluded from it
that there is in the perfection or magnitude of number some-
thing which surpasses our capacity; and therefore, that we
ought to infer the existence of a being more perfect than
we."[1] Even Pascal had brought together the idea of God and
that of infinite number, and what did he conclude from this
analysis? That one could indeed know that there is a God
without knowing his nature; since one knows that there is an
infinite number, while remaining ignorant of what it is."[2]
These philosophers, who were also mathematicians, were able
to write in this way because in the final analysis they pre-
ferred the authority of ecclesiastical tradition to that
of the principle of contradiction.

Why, asks Pillon, has the principle of the impossibil-
ity of infinite number remained philosophically sterile
since the time of Galileo? One can easily give the reason.
"The metaphysicians who were not mathematicians did not care
to think about it. They saw nothing in it which had to do

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(1) L'Année Philosophique, 1890, p. 82.

(2) Ibid., 84f.

with their speculations. The metaphysicians who were math-
ematicians did not wish, did not dare to think freely about
it, to look it, so to say, in the face, feeling more or less
confusedly that the numerical infinite was bound up with the
infinite of space and time, and the infinite of space and
time with the metaphysico-theological infinite; that, con-
sequently, it was necessary for them to preserve the first
in order to preserve the second, and to preserve the second,
in order to preserve the third."[1]

     5. <u>The Attributes of the Finite God</u>:-   The idea of
God which was supposed by Descartes to have been impressed
by the Creator upon every human mind represented God as
"sovereign, eternal, infinite, immutable, omniscient, omni-
potent". The neo-critist "principle of number" compels a
revision of this idea.

     By Pillon, as by Royce,[2] omniscience is treated as the
typical attribute of Deity. We may justify this method of
procedure on the ground that, in the first place, omnipotence
implies omniscience; knowing is only a particular kind of
doing. Not to know and not to be able to find out, would be
not to be able to do.

     In the second place, and conversely, omniscience implies
omnipotence; that knowledge is power is attested by the
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(1) L'Anneé Philosophique, 1890, p. 89.

(2) See Chapter III.

etymological affinity of the German können and kennen, and
the English can and cunning, and by the uses of the French
verb savoir. To know how, is the same thing as to be able.
An omniscient being, accordingly, will know how to do all
things, that is to say, will be able to do all things, will
be omnipotent.

Fillon approaches the discussion of the divine   omnis-
cience from the side of perfect foreknowledge. The problem
is to reconcile the idea of perfect foreknowledge with the
neo-criticist principle of number.

"All-knowledge is knowledge of all (tout). The all
which the supposedly perfect being knows can only be a real
whole (tout), and a real whole is a finite number".[1]

"But, does not the perfect foreknowledge which is at-
tributed to God, oppose itself to this thesis that omnis-
cience can comprehend only a whole of objects, i.e., can not
accommodate itself to a content actually infinite."[2]   Objec-
tion has frequently been made against the idea of a foreknow-
ledge of "free" acts. But the objection which Fillon is urg-
ing holds against determined events also.   For, "these nec-
essary or determined future events do not form a whole, a
determined number, since they are supposed to produce them-

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(1)   L'Année Philosophique, 1890, p. 173.

(2)   Ibid., p. 174.

selves in a time which has no limits. It is an endless

series, not simply of possibles, but of necessaries. It is

necessary to say that the potential infinity of these future

events finds itself in some manner realized in the divine

understanding; or else it is necessary to reject the perfect

and absolute foreknowledge even when it is a question of nec-

essary future events." [1]

This difficulty had been perceived by a Catholic phil-

osopher, Th.-Henri Martin. He had seen the contradiction

inherent in the notion of a realized infinite number, and had

made the application to the problem of the divine foreknow-

ledge. It was necessary for him, however, to conform to the

Catholic theology, and he suggested two ways of escape from

the dilemma. In the first place, the mode of the divine

knowledge may be such that it can, without contradiction,

embrace all the beings and all the events of an endless fu-

ture; or, secondly, it may be that the future will not be

endless, that is to say, that there should be a time after

which all production of new beings and of new events will

cease.

But, replies Dillon, "the first method need not be tak-

en seriously. Whatever may be the mode of the divine know-

ledge, what is contradictory, logically impossible, can not

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(1) L'Année Philosophique, 1890, p.174.

be the object of this knowledge any more than of human knowledge, unless one pretends that the principle of contradiction upon which we build all our reasonings, does not exist for the intelligence of God. In God, as in man, the knowledge of an infinite number of phenomena is not only incomprehensible, it is plainly contradictory. the divine intelligence can only embrace a whole; now the beings and events of the endless future do not form a whole, therefore, it can not embrace them".

The second solution seems to promise better than the first, until we bethink ourselves that the ending of the series of events presupposes the annihilation of all consciousness.

"These various considerations do not permit us to put an end to the ages which the divine foreknowledge would have to include. For the ages are never of empty time. Whatever be the moment of departure from which one considers their future indefinite succession, time would always be filled with duration without end, with the immortal life of creatures. It is therefore necessary to reject the second hypothesis of Th.-Henri Martin as well as the first."[1]

"Does it follow then that one ought to regard as impossible the perfection of foreknowledge? Yes, assuredly, if one makes this perfection consist in the knowledge of an

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(1) L'Année Philosophique, 1890, p. 175 - p. 177.

infinite number of future realities. No, if in place of attributing to the being who is supposed to be perfect a 'single infinite and eternal thought', one admits that his intelligence differs from ours by its extent, and not in respect of its nature; that it proceeds like ours by separate and successive acts of thought; that it is free to push back successively the limit of its horizon, but that it is always obliged to have a horizon. Thus understood, omniscience presents no contradiction".[1]

In other words, God might be assumed to be omniscient, or, at any rate, to know all that is now knowable, even if he is finite in the sense of the neo-criticist. The view of Mill and James, and of the previous chapter, which consists essentially in the denial of the omnipotence of any good person or principle, I have ventured to call, "Ethical Finitism". Now logical finitism suggests and makes room for, but does not in itself require ethical finitism. The reasons for denying omnipotence and omniscience are not merely logical; they are chiefly ethical. Yet, the neo-criticist argument prepares men's minds for the acceptance of this ethically grounded argument. Both arguments presuppose loyalty to the principle of contradiction, and both presuppose a certain freedom from the traditional preference for such words as "infinite", "omniscient" and "omnipotent" when employed as adjectives modifying the word "God".[2]

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(1) L'Année Philosophique, 1890, p. 170.

(2) See Chapter IX, Section 2.

THEOLOGY AND THE "NEW INFINITE"

"Starting", says James, "from the principle of the numer-
ical determinateness of reality, and recognizing that the
series of numbers, 1, 2, 3, 4, etc., leads to no final 'infi-
nite' number, ne (i.e., Charles Renouvier) concluded that such
realities as present beings, past events and causes, steps of
change and parts of matter, must needs exist in limited amount.
This made of him a radical pluralist. Better, he said, admit
that being gives itself to us abruptly, that there are first
beginnings, absolute numbers, and definite cessations, how-
ever intellectually opaque to us they may seem to be, than try
to rationalize all this arbitrariness of fact by working in
explanatory conditions which would involve in every case the
self-contradiction of things being paid-in and completed, al-
tho they are infinite in formal composition. With these prin-
ciples Renouvier could believe in absolute novelties, unmedi-
ated beginnings, gifts, chance, freedom, and acts of faith."[1]

It is then clear that the critique of infinity is funda-
mental for the neo-criticist view of the world. Unless this
critique is valid, the entire structure that has been built
upon it as a foundation must crumble. Now when Renouvier
wrote his principal works he could say that the mathematicians

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(1) Problems of Philosophy, p. 164.

were all agreed in rejecting the notion of an infinite number. As Arnal remarks,[1] "All the mathematicians who had weighed the terms of the alternative.....were unanimous. All from Galileo to Cauchy had emphasized the impossibility of the infinite of quantity, the absurdity of the realized infinite.... ..Why should that which is impossible and absurd from the point of view of mathematics be maintained from the point of view of metaphysics? If mathematics does not accommodate itself to contradiction, why should metaphysics"?

Since the middle of the last century, however, the mathematicians have been more favorably disposed toward the quantitative infinite, and the Neo-criticists' appeal to the consensus of all the mathematicians "from Galileo to Cauchy" is met by the counter-appeal to a rival consensus of philosophical mathematicians and mathematically-minded philosophers from Bolzano to Bertrand Russell.

1. The New Conception of Infinity.- Says Mr. Russell,[2] "A long line of philosophers, from Zeno to M. Bergson, have based much of their metaphysics upon the supposed impossibility of infinite collections. Broadly speaking, the difficulties were stated by Zeno, and nothing material was added until we reach Bolzano's Paradoxien des Unendlichen, a little work written in 1847-8, and published posthumously in 1851."

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(1) La Philosophie religieuse de Charles Renouvier, p. 56.

(2) Scientific Method in Philosophy, p. 165.

The movement thus initiated by Bolzano has culminated in the discovery of "transfinite" numbers and of a new definition of the infinite. If, as M. Couturat and others have maintained, Renouvier's critique of infinite number, and therefore his entire system of philosophy, is based on an erroneous definition of the mathematical infinite,[1] it becomes a matter of importance to inquire into the claims of the new and, as is maintained, more correct definition.

The "new" definition of infinity is an incident, perhaps the culminating incident, in the generalization of the conception of number.[2] If we had only the finite whole numbers, 1, 2, 3, etc., while the fundamental operations of addition, multiplication, and involution would be in every case possible, the inverse operations would not be universally possible. For example, it would be impossible, if we had only such numbers, to subtract 3 from 2, to divide 2 by 3, or to find the square root of 3. In order that subtraction, division, and evolution may be universally possible, mathematicians have introduced the conception of negative numbers and zero, of fractional numbers, and of irrational and imaginary numbers. The definition of "transfinite" numbers should therefore be considered, not as an isolated incident, but as a part of this larger

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(1)   L'Infini mathématique, pp. 444ff.

(2)   Couturat, De L'Infini Mathématique, pp. 5-66, 281.

movement of mathematical thought. One of the discoverers of
the conception of transfinite number was George Cantor. His
theory of numbers is found in two memoirs which appeared in
the Mathematische Annalen for 1895 and 1897 under the title
"Beiträge zur Begründung der transfiniten Mengenlehre". These
memoirs have been translated into English by Philip E. B.
Jourdain under the title of "The Theory of Transfinite Numbers".[1]

Cantor here defines the "power" or "cardinal number" of an
aggregate M as "the general concept, which, by means of our ac-
tive faculty of thought, arises from M when we make abstraction
of the nature of its various elements m and of the order in
which they are given". If we do not make abstraction of the
order, but only of the nature of the elements, the resulting
concept is the cardinal number of the aggregate M. Two aggre-
gates are equivalent, and therefore have the same cardinal num-
ber, "if it is possible to put them, by some law, in such a re-
lation to one another that to every element of each one of them
there corresponds one and only one element of the other".[2] Em-
ploying the notion of an aggregate and of equivalence, together
with the notions of "bindings" and "coverings", Cantor then de-
fines the concepts of "greater" and "less", and the operations
of addition, multiplication and involution.[3]

This brings him to a discussion of the finite and trans-

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(1)   Open Court, 1915.

(2)   The Theory of Transfinite Numbers, p. 86; for a further
      account of equivalence, see p. 90 below.

(3)   Ibid., pp. 89-95.

finite numbers. "Aggregates with finite cardinal numbers", he says, "are called 'finite aggregates'; all others we call 'transfinite aggregates', and their cardinal numbers 'transfinite cardinal numbers'." [1] The transfinite numbers are thus those that are not finite. We must therefore seek the distinguishing mark of the finite number. This is to be found in the following theorem: "If M is an aggregate such that it is of equal power with none of its parts, then the aggregate (M, e) which arises from M by the addition of a single new element e, has the same property of being of equal power with none of its parts". This theorem is used in establishing the fundamental properties of the "unlimited series of finite cardinal numbers," [2] and thus becomes a virtual part of their definition. Finite numbers, accordingly, are never equivalent to any of their parts, while transfinite numbers may be. "The first example of a transfinite aggregate", continues Cantor, "is given by the totality of finite cardinal numbers; we call its cardinal number 'Alephzero'." The first transfinite cardinal number is, then, the cardinal number of the "totality" of finite cardinal numbers. [3]

In the next chapter, I shall have something to say about the logical tenability of this notion of the "totality" of an

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(1) The Theory of Transfinite Numbers, p. 103.

(2) Ibid., pp. 97-103.

(3) Ibid., p. 103.

unlimited series. For the present, however, it is our purpose to understand his doctrine rather than to criticize it. A further advance in the theory of number ought next to be noted. Cantor, as we have seen, defined "cardinal number" and "ordinal type" as "general concepts which arise by means of our mental activity". Frege in his Grundlagen der Arithmetic of 1884, defined 'the number of a class u' as the class of all those classes which are equivalent to u. The same definition was discovered independently by Bertrand Russell. "The two chief reasons in favor of this definition", says Jourdain, "are that it avoids, by a construction of 'numbers' out of the fundamental entities of logic, the assumption that there are certain new and undefined entities called 'numbers;' and that it allows us to deduce at once that the class defined is not empty, so that the cardinal number u 'exists' in the sense defined in logic; in fact, since u is equivalent to itself, the cardinal number of u has u at least as a member." [1]

The "New Infinite" was independently discovered by Richard Dedekind. And to him probably belongs the honor of prior discovery. He admits, that "the property which I have employed as the definition of the infinite system had been pointed out before the appearance of my paper by G. Cantor, as also by Bolzano; but neither of these authors made the attempt to use this property for the definition of the infinite, and upon this

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(1) Ibid., pp. 202f; see Russell, Principles of Mathematics, pp. 262, 321.

foundation to establish with rigorous logic the science of numbers; and just in this consists the extent of my wearisome labor, which in all its essentials I had completed several years before the appearance of Cantor's memoir and at a time when the work of Bolzano was unknown to me even by name."[1]

Dedekind's definition runs as follows:[2]

"A system S is said to be <u>infinite</u> when it is similar to a proper part of itself; in the contrary case, S is said to be a <u>finite</u> system".

The words "system", "similar", and "proper part" are employed here in a technical sense, and require some explanation. A collection of objects is called a <u>system</u> (also by different writers an <u>aggregate</u>, <u>manifold</u> or <u>set</u>) when it fulfils the following conditions:[3]

(1) It includes all the objects to which a certain definite quality belongs.

(2) It includes no object which does <u>not</u> possess this quality.

(3) Each of the included objects is permanently the same, and distinct from all the others.

These separate objects are called <u>elements</u>.

In Dedekind's terminology, every system is a <u>part</u> of itself; while a system which contains some, but not all, of the elements of a given system is a <u>proper</u> part of the given system.

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(1) Essays on the Theory of Numbers, translated by W.W.Beman, p. 41. This is a translation of Dedekind's papers on "Stetigkeit und irrationale Zahlen" and "Was sind und was sollen the Zahlen."
(2) Ibid., p. 63.
(3) Cf.Encyclopedia Britannica, Article on Number.

The notion of similarity or equivalence (ähnlichkeit) is the same as that of "one-to-one correspondence"; and any two groups or series of objects are said to stand to each other in the relation of one-to-one correspondence when for each element or term of the one there is one and only one element or term of the other, and vice versa. To borrow an illustration from Russell,[1] "The relation of father to son is called a one-many relation, because a man can have only one father but may have many sons; conversely, the relation of son to father is called a many-one relation. But the relation of husband to wife (in Christian countries) is called one-one, because a man can not have more than one wife, or a woman more than one husband."

Dedekind's point is not that two systems which are assumed, or already known, to be infinite, are similar or one-to-one correspondent, even if the one infinite is only a part of the other. That such a similarity or equivalence is to be found between whole and part was, as we have seen, the very puzzle that had perplexed the older mathematicians. The achievement of Dedekind is rather the reversal of the method of attack. The "similarity" of whole and part is no longer merely an observed fact, nor is it for him an inference from their infinity; but infinity is now defined to be such similarity. If a system

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(1) Scientific Method in Philosophy, p. 203.

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or aggregate is similar to a proper part of itself, then it is infinite; and this is the definition of an infinite system.

The "new" conception of infinity has been hailed by many contemporary thinkers as an epoch-making discovery. Says Professor Keyser,[1] "The concept itself I regard as a great achievement, one of the very greatest in the history of thought". This estimate is shared by Professor Royce and Mr. Russell. In Russell's opinion it clears up all the difficulties in the notion of continuity, and makes it unnecessary to seek a finitist theory of the world.[2] Royce is confident that it saves his Absolute Self from the criticism of Bradley.[3] And last, but not least of its applications, Keyser employs it to defend the doctrine of the Trinity and the other dogmas of the "Old Theology."[4]

In the next chapter I shall try to show that the "new infinite" is only the old infinite in a rather easily penetrable disguise; that the definition of Dedekind is the logical equivalent of the definition suggested by etymology. If this be true, it is evident that, altho the new formulation may be more convenient for the purposes of the mathematician, it solves no puzzles resulting from or left unsolved by the old.

Yet the "New Infinite" has been enthusiastically welcomed;

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(1) Hilbert Journal, II, p. 540.
(2) Scientific Method in Philosophy, pp.130 and 155.
(3) The World and the Individual, Supplementary Essay.
(4) The New Infinite and the Old Theology.

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and it may be worth while to enumerate some of the reasons given for preferring it to the older notion:

(a) The old infinite has been said by many writers, notably by Royce, to be <u>negative</u>. [1] Now, as even Keyser remarks, whether the infinite is to be regarded as positive or as negative comes pretty near to being a mere matter of the use of words. [2] Nevertheless, the <u>words</u> infinite and endless are negative in <u>form</u>; they have an unattractive <u>sound</u>; and the form and sound of words are not wholly without influence even in philosophy.

(b) The notion of an endless regress, with its suggestion of <u>leere</u> <u>Wiederholung</u>, is obnoxious to many philosophers; and the new formulation seems to give us an infinite multiplicity, not as a regress, not successively, but, as it were, at a single stroke.

(c) The old notion of infinity gives rise to certain problems in the theory of motion and of the continuum. To Russell and others the new conception seems to offer a way of escape from these difficulties.

(d) Certain puzzles arise, as we saw in the last chapter, when the notion of infinity is applied to the series of

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(1) Royce, <u>op</u>. <u>cit.</u> Also <u>Hibbert</u> <u>Journal</u>, I, p. 32.
(2) Journal of Philosophy, etc.,I, p. 33; also <u>Hibbert</u>
     <u>Journal</u>, II, pp. 542f.

whole numbers. In the next chapter I shall discuss these
puzzles in considerable detail. It may not, however, be
amiss to suggest at this point that these mathematical puz-
zles are occasioned by the hypostatizing of the abstract
notion of endlessness. There is no prima facie absurdity
in the notion of an endless series of numbers, or years, or
miles. But when we go on to speak of the number of years
or miles or cardinal numbers, and then say that not only
the series itself, but the number of terms in the series is
infinite, we seem to be employing a mode of speaking that
is absurd or at least paradoxical. And the appearance of
absurdity or of paradox is increased when we say that the
last term of the infinite series is an infinite term; or,
still worse, that the last term is infinity.

Mathematicians sometimes permit themselves to say that
parallel lines are lines that "meet at an infinite distance";
that a series which by virtue of the law of its formation
is endless is "produced to infinity"; that a certain task
(for example, the writing of Tristram Shandy's autobiography)[1]
will be "completed in an infinite time". Now in all these
cases it is not impossible to hold that the mathematician is
merely employing the language of paradox. That "parallels
meet at an infinite distance" would then be no more than a

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(1) See Russell, Principles of Mathematics, I, 361; also
     Scientific Method, p. 157.

paradoxical way of saying that they <u>never</u> meet. That "the task will be completed in an infinite time", would mean that it will never be completed. That a series is "produced to infinity", or "has an infinite term", would be equivalent to saying that it is endless, and accordingly has no last term. An obvious motive for seeking to define a "New Infinite" is the desire to employ such expressions literally and not merely in a paradoxical sense.

It is a curious circumstance that the very properties of the series of cardinal numbers which, as we have seen, led all mathematicians "from Galileo to Cauchy" to reject the notion of infinite number, and which have seemed to Renouvier and his disciples to constitute a conclusive argument for a finitist view of the world, are now employed by the disciples of Dedekind and Cantor as illustrations of the surprising properties of the "New Infinite".

Thus from the fact that "the Number of Squares is not less than the Number of Numbers, nor this less than that", Galileo inferred that "the Attributes or Terms of Equality, Majority, and Minority, have no place in Infinites, but are confined to terminate quantities".[1] Now this apparent equality, or numerical equivalence, of the whole series of cardinal numbers and a proper part of itself, as illustrated by the possibility of exhibiting a one-to-one correspondence between "all" the numbers and the even numbers, or the odd numbers,

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(1) Quoted by Russell, Scientific Method in Philosophy, p. 194.

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or the primes, or the perfect squares, cubes, etc., is the
fundamental notion in the "New Infinite". The stone which the
builders rejected has indeed become the head of the corner.
The shame of the old infinite has become the pride and glory
of the new. Or, to employ less edifying language, the creators
of the "New Infinite" have "taken the bull by the horns"[1], and
escaped from the self-contradiction lurking in the notion of
infinity by making this very self-contradiction the heart and
center of their definition.

2. The New Infinite and Absolute Idealism:- Before pro-
ceeding to a more detailed discussion of the logical status
of the "New Infinite", it may be worth while to inquire con-
cerning the significance of this conception in theology on the
assumption that it **is** logically valid. First of all, it is
important to see a little more clearly the dependence of abso-
lute idealism upon the conception of infinity.

After giving the definition of an infinite system which
is quoted above, Dedekind proceeds as follows:[2]

"Theorem. There exist infinite systems.

"Proof. - My own realm of thoughts, that is, the totality
S of all things which can be objects of my thought, is infinite.
For if s signifies an element of S, then is the thought s', that

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(1)   James, Problems of Philosophy, p. 176.

(2)   Theory of Number, p. 64.

s can be object of my thought, itself an element of S. If we
regard this as transform ϕ (s) of the element s, then has the
transformation ϕ of S, thus determined, the property that the
transform S' is part of S; and S' is certainly proper part of
S, because there are elements in S (e.g., my own ego) which
are different from such thoughts s' and therefore are not con-
tained in S'. Finally it is clear that if $\underline{a}$, $\underline{b}$ are different
elements of S, their transforms a', b' are also different, that
therefore the transformation ϕ is a distinct (similar) trans-
formation. Hence S is infinite, which was to be proved."[1]

Now it is obvious that this "proof" assumes that every
thought can itself be an object of thought; that is, as Profes-
sor Keyser has pointed out it assumes that the realm of possi-
ble thought is infinite.[2] The real outcome of this reasoning
is not, therefore, the proposition that an infinite system
exists, for this was assumed; but merely that idealism is com-
pelled to make this assumption, i.e., to regard "my own realm
of thoughts" as infinite.

"One characteristic function of the self, says Professor
Royce, is the effort reflectively to know itself. Self-con-
sciousness we never fully get, but we aim at it......To define

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(1)   "By a transformation (Abbildung) ϕ of a system S we un-
      derstand a law according to which to every determinate
      element s of S there belongs a determinate thing which
      is called the transform of s and denoted by ϕ (s); we
      say also that ϕ (s) corresponds to the element $\underline{s}$."
      (Theory of Numbers, p. 50.)

(2)   Hibbert Journal, II, p. 549.

the ideally or formally complete Self is thus to define the infinite".[1]

Royce sees very clearly that his form of idealism must stand or fall with the conception of the realized infinite. "Whatever considerations make for an idealistic interpretation of reality, thus become considerations which also tend to prove that the universe is an infinitely complex reality, or that a certain infinite system of facts is real. For idealism,-in defining the Being of things, as necessarily involving their existence for some form of knowledge, is committed to the thesis that whatever is, is ipso facto known (e.g., to the absolute) ......Since, however, the fact world even for idealism contains many aspects (such as the aspects called feeling, will, worth and the like,) which are not identical with knowledge, although for an idealist they all exist as known aspects of the world, it follows that for an idealist the facts which constitute the existence of knowledge are themselves but a part and not the whole of the world of facts; yet by hypothesis, this part, since it contains acts of knowledge, corresponding to every real fact, is adequate to the whole, or in Dedekind's sense is equal to the whole. Hence, the idealist's system of facts must, by Dedekind's definition, be infinite; or for the idealist the

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(1) Hibbert Journal, I, 35f.

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real world is a self-representative system, and is therefore infinite." [1]

Moreover, if we try "to conceive.......the universe in realistic terms as a realm whose existence is supposed to be independent of the mere accident that anyone does or does not know or conceive it,........it is possible to show that this supposed universe has the character of a self-representative system," that is to say, is infinite. For, "if the supposition is itself a fact, then, at that instant, when the supposition is made, the world of Being contains at least two facts, namely, F and your supposition about F". Call the supposition f. Then your universe is at least F + f. But, "this universe as thus symbolized, has not merely a twofold, but a threefold constitution. It consists of F and of f, and of their +, i.e., of the relation as real as both of them, which we try to regard as non-essential to the being of either of them, but which for that very reason, has to be supposed wholly other than themselves, just as they are supposed to be different from each other." [2]

"Hereupon, of course, Mr. Bradley's now familiar form of argument enters with its full rights......the + is linked to f

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(1)   Hibbert Journal, I, 40.

(2)   The World and the Individual, p. 538f.

and to F and the 'endless fission' unquestionably 'breaks out'.
The relation itself is seen entering into what seem new rela-
tions."[1]

Thus Royce agrees with Bradley that every form of realis-
tic being "involves such endless or self-representative consti-
tution".[2] That in particular realistic being breaks down upon
the contradictions resulting from this constitution. Royce,
however, does not accept the view "that to be self-representa-
tive is as such to be self-contradictory".

It is, of course, clear to the realistic critic that the
arguments of Bradley and Royce depend upon the assumption that
relations are "internal", that is, that terms are constituted
by the relations in which they stand. If terms depend for
their being upon the relations in which they stand, then, that
a given entity _is_, implies that it is known to be. But if we
deny the principle of the internality of relations, the "end-
less fission" will not "break out"; and it will also be un-
necessary to suppose, with Dedekind and Royce, that _every_ thought
is itself the object of a thought, and this again the object
of another thought, and so on forever.

Royce, however, accepts this principle and therefore is
compelled to maintain that the "infinite regress" is not a
fatal defect. The infinite regress is fatal, he holds, only

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(1)   The World and the Individual, p. 540.

(2)   Ibid., p. 542.

when you take it term by term, i.e., successively; if you
assume the infinite multitude or series of terms to be given
all at once in one single purpose or plan, the infinity be-
comes harmless.

How, then, is it possible to take Bradley's "infinite re-
gress" all at once? Royce illustrates his meaning in various
ways. Some manufacturers have ingeniously used a picture of
the package in which their product is contained as a trade
mark, and have then placed this trade mark as a label upon the
package. "But, the package, thus labeled with its own picture,
inevitably requires the picture to contain for accuracy's sake..
.......a picture of itself."[1]

Or,suppose that somewhere upon the soil of England there
is a map of England. Suppose, further, that this map is a
perfect representation, indicating every detail of the surface
of England. It is clear that this map must also contain a map
of itself.

Now, the attempt actually to construct either an accurate
picture or a perfect map of the sort just described, would re-
quire, says Royce, an endless process and therefore be impos-
sible of fulfillment; but the plan itself is given all at once.
"Mathematically regarded the endless series of maps within maps,

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(1) Hibbert Journal, I., 26.

if made according to such a projection as we have indicated, would cluster about a limiting point, whose position would be exactly determined. Logically speaking, their variety would be a mere expression of the single plan, 'Let us make within England and upon the surface thereof, a precise map, with all the details of the contour or its surface'.........
The one plan of mapping in question necessarily implies just this infinite variety of internal constitution......We are not obliged to deal solely with processes of construction as successive, in order to define endless series".[1] "To conceive the true nature of the infinite, we have not to think of its vastness, or even negatively of its endlessness; we have merely to think of its self-representative character."[2]

In the next chapter, I shall inquire into the validity of this attempt to avoid the infinite regress by the method of definition. For the present it may be sufficient to remark that Royce seems to have overlooked a rather obvious logical requirement, which is thus stated by Poincaré:[3] "In defining an object we affirm that the definition does not imply a contradiction". The question is not merely, then, whether the plan gives us a non-successive multiplicity, but rather whether

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(1)   The World and the Individual, p. 506f.

(2)   Hibbert Journal, I., 35.

(3)   Science et Méthode, p. 162.

the plan or purpose, as defined, is free from internal contradiction.

Let us, however, for the present ignore the question of the logical validity of the conception, in order to inquire concerning the more specifically theological uses to which it is to be put. Not only does the new or "positive" conception of the infinite enable us to retain the idea of the self, and of God, but in Royce's opinion, it enables us to understand the relation of the World to the Individual, of the Absolute to the Particular Self.

"Meanwhile, to look in yet another direction, the concept that, in an infinite system, the part can, in infinities of the same dignity, be equal to the whole, throws a wholly new light upon the possible relations of equality which, in a perfected state, might exist between what we now call an Individual or a Created Self and God as the Absolute Self. Perhaps a being, who, in one sense, appeared infinitely less than God, or who at all events was but one of an infinite number of parts within the divine whole, might, nevertheless, justly count it not robbery to be equal to God, if only this partial being by virtue of an immortal life or of a perfected self-attainment, received in the universe somewhere an infinite expression." [1]

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(1) Hibbert Journal, I., 44.

When we recall, however, that to be "of the same dignity" and to be "equal" here mean no more than to be of the same "Mächtigkeit", i.e., to be in the relation of one-to-one correspondence, it is far from clear that the "infinite expression" of the partial being is of any _spiritual_ or _ethical_ significance.

5.   The New Infinite and the Traditional Theology:- Professor Royce has just made use of the principle that, in a certain sense of the term _equal_, an infinite part may be equal to the whole of which it is only a part. Professor Keyser, who is by profession a mathematician, regards this implication of the conception of the "new infinite" as a principle of great significance for theology. It is a great error, he tells us, to suppose that the whole is _always_ greater than the part. In fact, the whole-part axiom is true only for finite wholes and parts. This axiom may then be considered as a sort of "logical blade", which separates the finite from the infinite. Some of the difficulties of theology, he assures us, have been caused by assuming erroneously that the whole-part axiom applies also to infinites. Thus, the new infinite becomes a weapon in Christian Apologetics.[1]

(a)   The doctrine of the Trinity, says Professor Keyser, has been pronounced " infinitely absurd", because it implies

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(1)   The New Infinite and the Old Theology, pp.85f.

that one infinite is composed of three infinites, and that
each of the three is equal, not only to each of the others,
but to the whole which they jointly constitute. The discov-
ery of the new infinite, however, shows that the absurdity
is on the side of the objector. For the objection erroneous-
ly assumes that the whole-part axiom is valid in the case
of infinites. Professor Keyser illustrates the logical pos-
sibility of the conception of a One, that is also Three, by
means of the relation of the number system to certain of
its parts.

Let M be the manifold of all the rational numbers, E
of the even numbers, O of the odd numbers, and F of the
rational fractions; then it is evident that E, O, and F are
proper parts of M; and also that a one-to-one correspondence
is discoverable between M and each of these parts taken
separately. Therefore, by Dedekind's definition, M, E, O,
and F are all infinite manifolds.

"What is important is now obvious", says Keyser. "It
is that we have here three infinite manifolds, E, O, F, no
two of which have so much as a single element in common,
and yet the three together constitute one manifold M exact-
ly equal in wealth of elements to each of its infinite com-
ponents."[1] The application to the case of the theological
Trinity is of course evident.

An obvious objection suggests itself. One might natur-
ally inquire why there are just three rather than two or

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(1)   The New Infinite and the Old Theology, pp.89f.

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<u>four</u> persons. Indeed, the mathematical analogy might suggest an infinity, or at least a very large number, of constituent persons; and, as we have seen, Professor Royce holds that the Absolute may be conceived without contradiction to include a multitude, and, in fact, an infinite multitude, of infinite selves.

The objection, however, misses Keyser's point, which is, not that the doctrine of the Trinity can be mathematically demonstrated, but merely that, if, on some other ground, we believe that the One is Three and the Three are One, the conception is not logically absurd.

It may be questioned, however, whether the aid thus so kindly proffered by <u>Mathesis</u> to theology will be very enthusiastically received. Trinitarians like Cardinal Newman who seem rather to have liked the doctrine all the more on account of its incomprehensibility,[1] may even be disposed to resent this attempt to make their cherished formula as plain and clear as the multiplication table, or the rule of three; for, if the Trinity is not incomprehensible, half the merit of assenting to the ancient creeds will be lost. On the other hand, adherents of the "new theology" who still consider themselves Trinitarians, have learned to <u>interpret</u> the ancient formulae in such a way as to remove

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(1) <u>Grammar of Assent,</u> pp. 134ff.

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the contradiction. In this interpretation, they have indeed gone back to the error of Sabellius, or some other ancient heretic; but they are not afraid of ancient heresies, and therefore do not recognize the <u>need</u> of a demonstration of the conceivability of a numerical Trinity in Unity.

(b) Objection has frequently been made to the <u>doctrine of the divine omniscience</u> on the ground that it seems to abolish human freedom, and thus to make God responsible for human sin. Professor Keyser suggests that we may preserve the <u>dignity</u> of omniscience while giving up omniscience in the strict sense of the term.

Suppose the knowledge of all events to include an infinite number of knowledge-elements. Now suppose this infinite manifold to be divided by a plane which in our imaginative construction represents the present instant. Then it is evident that there is a one-to-one correspondence between the manifold of elements, either before or behind this boundary, and the undivided manifold. In other words, the knowledge of the past alone is just as infinite as the knowledge of the events of all time.

Accordingly, even if God is assumed to have no knowledge of undetermined future events, His knowledge is nevertheless infinite; and, in the phraseology of the partisans of the "New Infinite", God may still be said to possess the <u>dignity</u> or <u>Mächtigkeit</u> of omniscience.

The same argument is easily made to fit the case of
omnipotence or of omnipresence. In an infinite world the
Deity might conceivably be infinite in knowledge, power,
etc., without being omniscient, omnipotent, or omnipresent.
One may however be sufficiently "tough-minded" to inquire
just what is the value of the word "infinite" and the
phrases "dignity of omniscience", etc. Certainly no one
would hold that merely to be infinitely rich in numerical
elements is a quality which is of any ethical value; for,
if it were, then any portion of a continuum would possess
this transcendent dignity.

We may, therefore, conclude this chapter by saying that,
even if the conception of the New Infinite be regarded as
valid, it is barren of ethical or religious significance.
In the next chapter I shall show that the notion of the
realized infinite has not been saved by the reformulation
of the definition of infinity. If this conclusion can be
established, Renouvier's criticism will stand, and the Abso-
lute of monistic idealism will be a logically impossible
conception.

THE DEFINITION OF INFINITY

Both finitists and infinitists, as we have now seen, main-
tain that a study of the notion of infinity will throw some
light upon the central problems of theology. If this be true,
the mathematician may be permitted to invade the territory
of the theologian, and one whose primary interest has been
in the field of theology and philosophy may be pardoned for
attempting a discussion of the puzzles of the number-system.
This is my excuse, if any excuse be needed, for including a
discussion of "transfinite number" in what is, for the most
part, a theological inquiry, and thus presenting what may
seem to the casual reader to be a strange combination of di-
verse topics.

Professor Keyser points out, in his little book on
Science and Religion[1], that religion, like political virtue,
"is not essentially of the nature of a technical science or
art, to be wholly committed to the charge of experts and
specialists, but....is an affair and concern of us all." It
follows that, just as every one, at least in a democracy, is
assumed to be able to take part in the discussion of politic-
al issues, so every one, at least in a Protestant community,
may be supposed to be competent to discuss the problems of

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(1) Page 3.

religion and theology. If, then, mathematics has an important contribution to make to theological and philosophical discussion, it might be argued that every one is also to be assumed to be capable of learning to understand the mysteries of the number-system, so far, at least, as they are related to the problems of theology.

If, as is not unlikely, this inference may seem a little far-fetched, there is a further consideration which may perhaps be permitted to encourage one who is but a layman in mathematics to venture upon an investigation such as will be found in the following pages of this chapter. It is that, as a matter of fact, no profound or detailed acquaintance with the higher mathematics is a pre-requisite to the understanding of the new definition of infinity. What the discoverers of the "New Infinite" have been trying to do, has been, not add to the superstructure of the edifice which we call the science of mathematics, but rather to provide it with a new foundation. Their work can not presuppose a knowledge of the higher mathematics, because they profess to begin in the beginning, or indeed to begin before the conventional beginning of arithmetic, algebra, and geometry. And, however oracular the tone at times assumed by some of the disciples, the masters themselves have recognized this fact. Thus Richard Dedekind says expressly that his "memoir can be understood by anyone possessing what is usually called good common sense; no technical philosophic, or mathematical, knowledge is in the least degree required."[1]

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(1) Essays on Number, p. 33.

Indeed, inasmuch as the foundations of the science of number must be a part of logic, the ability to understand the problems suggested by the phrase "New Infinite" would seem to depend, if anything more is required than "good common sense", upon some knowledge of what is conventionally known as philosophy, rather than upon a knowledge of the science of mathematics itself.

1. The "Old" Infinite: The Infinite as the Endless. - Altho the etymology of a word is not an infallible guide to a knowledge of its meaning in current usage, it is frequently of some assistance in the task of defining the notion for which the word stands. By studying the formation of a word we get some insight at least into its historical and, so to speak, its pre-technical significance. I believe that this general principle holds in the case of the words "infinite" and "infinity"; and I shall try to show in the course of the present chapter that the attempt to formulate a new definition of the infinite, or, as some may prefer to say, to formulate the definition of a new infinite, does not take us in principle beyond the notion suggested by etymology.

It is obvious that the primary meaning of "finite" is ended, enclosed, or bounded. The word "infinite" is, of course, the negative of "finite"; and, if we had no other preceptor than etymology, we should at once conclude that the infinite is that which is limitless, boundless, incapable of completion, or, to use a convenient, but, unless carefully guarded and qualified, an ambiguous word, that which is endless. The Ger-

man language, much more reluctant than the English to appro-
priate foreign words, has a curious fashion of translating
terms of Greek or Latin origin syllable by syllable. Thus,
even in the technical writings of German philosophers, the
terms infinite and infinity appear respectively as unendlich
and Unendlichkeit.

Accordingly, prompted and encouraged by etymology, we
take as our preliminary definition, The infinite is the end-
less, and infinity means endlessness.

It would scarcely seem necessary to explain, that when
the infinite is said to be that which is endless, the word end
is not contrasted with the word beginning. Yet, this elemen-
tary blunder has apparently been made by Kant in proving the
thesis of his first antinomy. He sets out to demonstrate that
the world must have had a beginning; and this in substance
is the demonstration:[1]

If you assume the contradictory of the thesis, that is
to say, if you suppose that there was no beginning in time,
then at any given instant "an infinite (unendlich) series of
states of things must have passed in the world." But this is
equivalent to the assertion that at every given instant the
unendlich would be ended, which is absurd.

However, as Kant's critics have been quick to point out,
the end which is lacking in the case of the infinite series of

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(1) Kritik der Reinen Vernunft, A, 426 (Mueller's translation,
p. 344).

past events is none other than the beginning.[1] A finite time has two ends. If then, and in saying this I do not wish to prejudice the question of the finitude or infinity of past time, past time be assumed to have no first end, or beginning, then it may rightly be called infinite or endless.

There is, accordingly, no prima facie contradiction in the notion of an endless series. For example, the series of whole numbers is a series which has a first term but no last term; and a series composed of whole numbers and fractions in geometrical progression, such as .....8,4,2,1,1/2,1/4,1/8,.... is a series that has neither a first nor a last term.

Mr. Russell, however, objects to the definition of the infinite as the endless. "Etymologically", he says,[2] "infinite should mean 'having no end.' But in fact some infinite series have ends, some have not; while some collections are infinite without being serial, and can therefore not properly be regarded as either endless or having ends. The series of instants from any earlier one to any later one (both included) is infinite, but has two ends; the series of instants from the beginning of time to the present moment has one end, but is infinite."

Whether "some collections are infinite without being serial" is a question which may be postponed until some prior problems have been discussed. It may, however, not be amiss to remark here that the notion of an end need not be interpret-

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(1) See Russell, Scientific Method in Philosophy, p. 157.
(2) Ibid., p. 179.

ed so narrowly as to mean only a first or a last term of a
series. A bounded collection has an end, or rather it has two
or more of them; while an infinite collection, assuming the
notion to be logically permissible, may have an end or several
of them, but must be without a boundary in at least one direc-
tion. An "endless" series, too, need not be absolutely in-
determinate. Such a series may consist of objects or elements
of a quite specific kind, and all objects not of this kind
may be excluded from its domain. Its terms may succeed one
another in accordance with a definitely formulated law. In
other words, so long as our ring-fence of definition is not
absolutely complete, an infinite may be said to be defined;
and there is therefore no difficulty in supposing that one in-
finite series may be logically distinguishable from another,
and indeed from all others.

The last count in Russell's indictment, namely, the as-
sertion that "a series of instants from the beginning of time
to the present moment has one end, but is infinite" (ignoring
just now the notion of infinite divisibility suggested by the
use of the term "instants" rather than "events") is a valid
objection, and requires us to qualify our definition, as I
have done, by counting the beginning also as an end. A series
of events, or of finite times, such as seconds or hours or years,
has an end at the present moment, or may be considered as end-
ing with any arbitrarily chosen event, second, hour, or year;
and yet, if it has no beginning (an assumption which is here
made only for the sake of the argument), it is endless or in-

finite.

The remaining objection alleged by Russell depends upon the notion of infinite divisibility and of the continuum. "The series of instants from any earlier one to any later one (both included) is infinite, but has two ends." Now it is clear that the series of seconds or minutes or of any other finite units of time from any earlier to any later unit is finite. The "infinity" of the series of instants which has two ends arises by the discovery, or the interpolation, or the assumption of the existence, of other instants between the instants of the bounded series. Of course, if we accept the theory of the continuum, we can set no limit to the number of terms of a series which is by definition continuous. But the sequence of instants between any two instants is not one, but at least two infinite or endless series, each beginning with one of the "ends" of the portion of time in question, and continuing without end. Indeed, since any instant of the time-continuum may be taken as the first term of an endless series, we are constrained to think of any interval of time, however small, as consisting of an endless series of endless series, each series in turn, as we meditate upon it, dissolving into an infinite procession of series, and so on without end.

Whether or not the notion of continuity, either in its simpler form of mere "compactness" or in its more complicated form of continuity properly so-called, is logically tenable, is, of course, a disputed point; and in the eyes of Mr. Russell the chief value of the new conception of infinity is precisely

its supposed transcendence of the logical difficulties which have been discovered in the notion of the continuum. It is not evident, however, that we are logically justified in attempting to sugar-coat a self-contradiction by including it in a definition.

The definition of infinity adopted by Kant in his account of the "First Conflict of the Transcendental Ideas" appears to be no more than an elaboration of the notion of <u>Unendlichkeit</u>. "The infinity of a series", he says, "consists in this, that it can never be completed by means of a successive synthesis." Or again, "The true transcendental concept of infinity is, that the successive systhesis of units in measuring a quantity can never be completed."[1] It is evident, I think, that this is only another way of saying that the infinite is the endless.

Another definition which is of considerable historical importance is that of Bolzano. Professor Keyser paraphrases it as follows:[2]

"Suppose given a class C of elements. Out of these suppose a series formed by taking for first term one of the elements, for second term two of them, and so on. Any term so obtained is itself a class of elements, and is <u>defined</u> as finite. Now either the process in question will exhaust C or it will not. If it will, C is itself demonstrably finite; if it will not, C is <u>defined</u> to be infinite."

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(1) <u>Kritik der Reinen Vernunft</u>, A, 426 and 432 (Mueller's trans-lation, pp. 344-348)

(2) <u>Journal of Philosophy</u>, etc., I, 83.

Bolzano is recognized as the initiator of the movement
which led to the formulation of the much-heralded "New Infinite".
And, indeed, Keyser tells us in the article from which the
above excerpt has been taken that Bolzano's definition, altho
perhaps not so convenient in the actual practice of the mathe-
matician, is in principle exactly equivalent to that of Dede-
kind. However this may be, it seems clear that Bolzano's defi-
nition is in principle exactly equivalent to that of Kant. The
difference between the two appears to be formal only. Kant
employs the method of addition; Bolzano that of subtraction.
The former is thinking of the completion of a somewhat that
exists only as a scheme or plan; the latter is thinking of the
depletion of an already existing class of elements. Yet the
fundamental thought is the same in both: that which is infinite
is endless; and, because it is endless, it is impossible either
to construct anything so great as to equal it, or to take away
from it anything so great as to exhaust it.

2. The Infinite as that which is Similar to a Proper Part
of Itself.- Let us proceed to a consideration of the "New
Infinite". I have promised to show that it is only the old
infinite in a new suit of clothes. Says Dedekind,[1]

"A system S is said to be infinite when it is similar to
a proper part of itself; in the contrary case, S is said to be
a finite system."

In the first section of Chapter VII, I attempted to ex-

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(1) Essays on Number, p. 63.

plain what is meant by the technical terms that are included in this definition; those explanations need not be repeated here. An obvious objection presents itself to this definition as soon as we are given illustrations of this one-to-one correspondence or similarity of a whole and one of its proper parts. To be sure, as far as we can test the matter, there is a term in the series of even numbers, of prime numbers, of exact squares, and so forth, for every term of the series of whole numbers. But to test the matter completely would obviously require in each case the enumeration of all the terms of an endless series, or rather of two such series. Thus in a recent number of the Monist[1] Professor Shaw argues that it is never possible to be absolutely certain that a term of the part does in fact correspond to every term of the whole. Take for example "the proof that the rational numbers can be put into a one-to-one correspondence with the integers. While any one rational may be placed in this way, or any finite number of them, yet .... it is not possible to decide that we can place every rational in this way. Manifestly any operation that has to be done in successive steps will never reach an absolute infinity."

To this objection a partizan of the "New Infinite" might make two counter-objections. He might say, first, that it misses Dedekind's point. It seems to imply that, the infinite being defined in the old way, as the endless, and two classes

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(1) July, 1916.
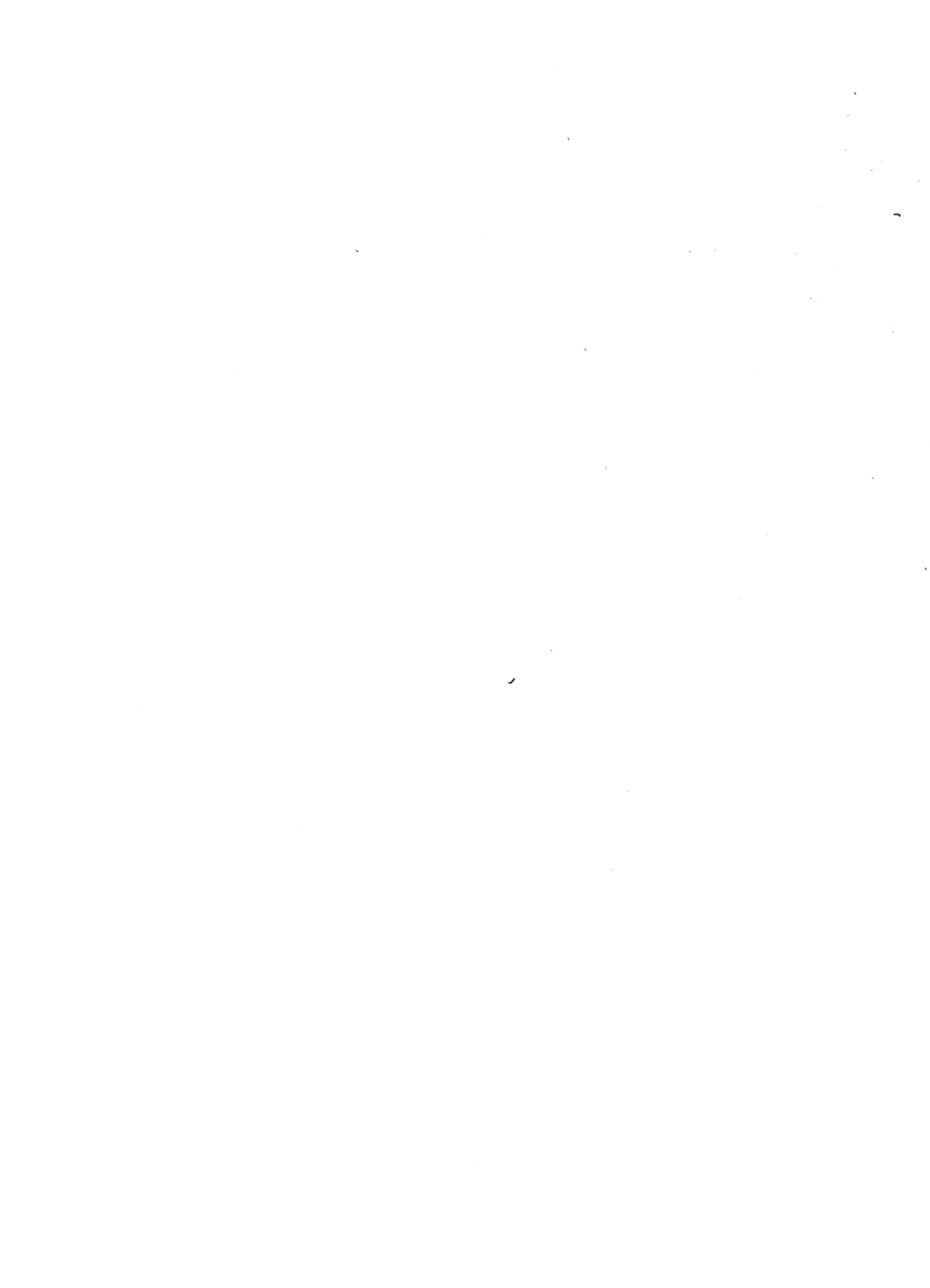
being given that are admittedly infinite in this sense, one of
which is a proper part of the other, Dedekind seems to prove
that they are in one-to-one correspondence. It is important
to remember, however, that Dedekind's formula does not profess
to give us an additional piece of information about classes
or series that are assumed or already known to be infinite,
but itself to be a definition of their infinity. The one-to-
one correspondence of the given system and a proper part of
itself is not, accordingly, an inference from the infinity of
the system, and it is not, as the objector seems to think, a
fact discovered by inspection; for the task of inspection
would indeed be, as he affirms, a never-ending process. The
correspondence is assumed to exist. In other words, the defin-
ition is hypothetical. It does not assert the existence of
any infinite systems, but merely says that if a given system
is similar to a proper part of itself, then, by definition,
this system is infinite.

Thus our imaginary infinitist might, perhaps, contend
that even if we were unable to prove with apodictic certainty
that there are any infinite systems such as have been defined
by Dedekind, the definition need be none the worse for that.
In that case the class of systems conforming to the requirement
might be a class without members, and the conception of an in-
finite system might still be perfectly valid.

In the second place, our infinitist might reply that
the similarity or one-to-one correspondence of whole and part
is not so much a fact that can be verified by experiment, as a

relation that results necessarily from the very law of the
formation of the two series in question.

Consider, for example, the relation of the series of
whole numbers to the series of even numbers. The relation may
be shown as follows:

(W) 1, 2, 3, 4, 5, 6, ...

(E) 2, 4, 6, 8, 10, 12, ...

Now it is clear, the infinitist might say, that the sec-
ond series is a proper part of the first; since every term con-
tained in the second is also contained in the first, while
many of the terms of the first, to wit, all the odd numbers,
are not contained in the second. And yet every term of the
first series is bound up with a term of the second. Further-
more, he would tell us, this linking of terms is not a merely
fortuitious association. For, be it observed that the par-
ticular number of the second series which shall be paired with
a given number of the first is determined by a clear and defi-
nite <u>law</u>. These marriages are not the result of mere human
caprice; they are made in Heaven. Now the <u>law</u> in accordance
with which this association of terms is prescribed is this:
that <u>any</u> given term of the whole series is to be paired with
its <u>double</u>. It is not necessary, then, to <u>count</u> the terms of
the two series in order to assure ourselves that there are just
as many terms in the one as in the other; it is not necessary
that anyone should actually have set them opposite one another
in parallel lines or columns. They are already and from all
eternity in this relation by virtue of the unchanging
law that the terms of the one are respectively twice
as great as the terms of the other.

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It is evident that if we are to convince the infinitist that his "new" infinite is merely the old infinite in disguise, we must find an argument that does not overlook the Gesetz-mässigkeit of the relation of one-to-one correspondence which obtains between the whole series and its proper part. As the principal thesis of this argument I shall endeavor to prove the following:

In every case where a series is found to be in one-to-one correspondence with a proper part of itself, it may be shown to be in an m -to- n correspondence with the same part (m and n being any whole numbers); and any one scheme or plan of corres-pondence may be shown to be just as rigidly determined by law as any other; specifically, as the scheme of one-to-one cor-respondence, which the partizans of the "New Infinite" have too hastily assumed to be the relation in which the two series eternally stand.

In other words, I shall show that any two endless series that may be put in one-to-one correspondence may also be plac-ed in any sort of correspondence that is arbitrarily chosen; or, if the other point of view be preferred, that they are in any sort of correspondence that anyone may happen to wish to see. Let us first consider the relation of all the numbers to the prime numbers. We may, if we wish, see the terms of these two series, the second of which is a part of the first, harmoniously joined in the monogamous relation of one-to-one correspondence; or any sort of universal polygyny or polyandry that may be looked for may be discovered. Some of these various

cases may be illustrated as follows:

I.
(W) 1, 2, 3, 4, 5, 6, 7, 8, ...
(P) 1, 2, 3, 5, 7, 11, 13, 17, ...

II. (W) 1, 2, 3, 4, 5, 6, ...
(P) 1,2, 3,5, 7,11 13,17, 19,23, 29,31,........

III. (W) 1, 2, 3, 4, 5,
(P) 1,2,3, 5,7,11, 13,17,19, 23,29,31 37,41,43,.......

IV. (W) 1,2, 3,4, 5,6, 7,8, 9,10, ...
(P) 1, 2, 3, 5, 7, ...

V. (W) 1,2,3, 4,5,6, 7,8,9, ...
(P) 1, 2, 3, ...

VI. (W) 1,2, 3,4, 5,6, ...
(P) 1,2,3, 5,7,11, 13,17,19, ...

It is clear, I suppose, that Case I. is the situation
which the "new" definition of the infinite presupposes and,
somewhat uncritically, assumes to be the situation. But in
the world of primes and whole numbers, monogamy is not logic-
ally compulsory. Cases II and III may be compared to two sorts
of polygyny, and IV and V to the corresponding kinds of poly-
andry. But now the marital analogy fails us; for the last case
is that of a two-to-three correspondence. And so we might go
on indefinitely.

It is clear, then, that there is no fixed and stable re-
lation of correspondence, between the series of whole numbers

and this particular "proper part" ot itself. The formula for
the relation of whole and part is not simply, as the partizans
of the "new" infinite seem to suppose, W P, but rather, W p_2,
W_2p, W_2p_3, etc., or, in general, where $\underline{m}$ and $\underline{n}$ are any in-
tegers, W_mP_n. That is to say, the <u>valence</u>, or combining power,
of the elements of the whole series and of this "proper part"
is not <u>constant</u>.

So far as I know, however, in the case of the primes,
neither the one-to-one correspondence nor any other can be
shown to be determined by a <u>law</u>. Accordingly, as the defenders
of the "new" infinite have made much of the fact that in some
cases the correspondence <u>is</u> thus accurately and necessarily de-
termined, they are likely to object at this point that the case
of the primes is not typical. Let us, accordingly, consider
the case of a proper part that <u>is</u> typical. Consider the case
of the series of even numbers, which as we saw on page 1$\textbf{19}$ above,
is a proper part of the series of whole numbers, and yet is
required to stand in one-to-one correspondence with that series
by the law that each of its terms is a number twice the cor-
responding term of the series of whole numbers. But here, too,
we find that any other correspondence may be seen, if we wish
to see it. This may be exhibited thus:

```
        (W)   1,    2,   3,    4,  5,   6, .........
   I.
        (P)   2,    4,   6,    8, 10,  12, ..........

        (W)   1,    2,   3,    4,    5, ..........
  II.
        (P) 2,4,   6,8, 10,12, 14,16, 18,20, ........
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III.
| (W) | 1,2, | 3,4, | 5,6, | 7,8, | .... |
| (P) | 2, | 4, | 6, | 8, | .... |

IV.
| (W) | 1,2, | 3,4, | 5,6, | 7,8, | .... |
| (P) | 2,4,6, | 8,10,12, | 14,16,18, | 20,22,24, | .... |

Case I is the case which has been supposed to be the sit-
uation. In the other three cases we have respectively a one-to-
two, a two-to-one, and a two-to-three correspondence. Now these
other sorts of correspondence are determined by a clear and
definite rule, of exactly the same kind as, altho a little more
complicated than, the rule which determines the one-to-one cor-
respondence. In Case II, let the rule be, that the second of
the two terms paired with any one term of the whole series shall
be four times that term; in Case III the second of the two
terms of (W) is the same number as the one term of (P) with
which the two terms of (W) are bound up; in IV every two terms
of (W) are bound up with three of (P), and the rule determin-
ing the correspondence is, that the last term of any given
group of (P) shall be three times the last term of the corres-
ponding group of (W). Now it is necessary to insist that the
(P) of I , of II , of III and of IV is exactly the same series.
The proper part, 2, 4, 6, 8, 10,12, 14, 16, ...,
is the proper part that is considered in each case. It has
been shown, then, that the whole series stands to this proper
part in these various relations of correspondence in exactly
the same sense in which it stands to it in the relation of
one-to-one correspondence.

The results of the preceding paragraph may be summed up

by means of the following formula: $2an/m = \acute{a}$.

In this formula a is any given term of the whole series, or when the series is grouped in twos, threes, etc., it is the last term of the given group; $\acute{a}$ is in the same way a term of the series of even numbers, or the last term of the group which is bound up with the term or group represented by a; m and n represent respectively the number of terms in each of the corresponding groups. The value of a being given we can then by means of this formula find the last term of the group of the series of even numbers that is bound up with the group that ends with a, and thus determine an m -to- n correspondence. Suppose, for example, that we wish to determine a three-to-four correspondence. In this case $m = 3$, and $n = 4$. The last term of any group of the whole series must obviously be a multiple of 3. Take the group ending with 3 ; then our formula gives $2 \times 3 \times 4/3 = 8$, as the value of $\acute{a}$, and the two corresponding groups are, accordingly,1,2,3, and 2,4,6,8. Or, if a is 12, the value of $\acute{a}$ becomes 32, and the corresponding groups of the whole and the proper part are shown to be 10,11,12, and 26,28,30,32. If m and n are both equal to 1 we, of course, have a one-to-one correspondence. In that case the expression for the value of a becomes $2\underline{a}\times1/1 = 2a$, which is our rule that to determine a one-to-one correspondence any given term of the whole series is to be paired with its double.

Next consider the relation of the following series:

(W) 1,   2,   3,   4,   5,   6, ...

(A) 3,   6,   9,   12,   15,   18, ...

(B) 1,   4,   9,   16,   25,   36, ...
(C) 5,   6,   7,   8,   9,   10, ...

    (W) is, of course, the whole series of cardinal numbers.
(A), (B), and (C) are proper parts of this series. Each is the
result of a definite mode of derivation, and is thus the rep-
resentative of a specific type of proper parts. (A) belongs
to the same type as the proper part which we have just been dis-
cussing, - the series of even numbers. The terms of the series
of this type are <u>multiples</u> of the terms of the natural series
by some common multiplier, as 2,3,4, etc. Call this common
multiplier $\underline{r}$; then the formula for determining an $\underline{m}$ -to- $\underline{n}$
correspondence between the terms of the whole series and any
proper part of this type, is $\underline{nra/m} = a'$, and the formula for
a one-to-one correspondence is $\underline{ra} = a'$.

    The series (B) is a proper part every term of which is
a perfect <u>square</u> of a term of the series of cardinal numbers
(W). (B) then represents the type of proper parts derived by
<u>involution</u>, as the proper parts of the preceding type are de-
rived by <u>multiplication.</u> Here again we have a general formula
for an $\underline{m}$ -to- $\underline{n}$ correspondence. It is, $(\underline{na/m})^p = \underline{a}'$, where $\underline{p}$
is the index of the power to which each term of (W) has been
raised to produce the terms of the proper parts of the type of
(B). The formula for the special case of a one-to-one corres-
pondence, i.e., for the case where $\underline{m} = \underline{n} = 1$, is then, $\underline{a}^p = \underline{a}'.$

    The series   (C) represents the proper parts derived by
the <u>addition</u> of a common increment to the successive terms of

(W). (In   (C)   this increment is 4.) It is easy to show that here too we have precise formulae. The formula for any sort of correspondence is $na/m + h = a'$, and that for the one-to-one correspondence is, of course, $a + h = a'$, h being the common increment and m, n, a, and a having the same meaning as above.

Thus in every case that we have examined where a whole is "similar" to or in a relation of one-to-one correspondence with, a proper part of itself, it may also be shown to be in one-to-two, or two-to-three, or three-to-four, or any kind of correspondence that one pleases to look for with the same part; I have shown this to be true,not only in the case where the proper part in question is a series like that of the prime numbers[1], where no definite law of correlation is apparent, but also in that of proper parts like the series of even numbers, where the various schemes of correspondence are seen to be determined by precise and rigorous laws. The correspondence of a whole and a proper part of itself, which has been taken as the essential notion in the "new" definition of infinity, turns out, when more closely scrutinized, to be a nose of wax; it can be bent in any direction that one pleases.

Let us recall the words of Dedekind's definition: "A system S is said to be infinite if it is similar to a proper part

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[1] In the case of the prime numbers the possibility of an m-to-n correspondence has, indeed, been pointed out rather than proved. No formula for an m-to-n correspondence has been given in the case of this proper part; but, so far as I know, no formula exists in this case for the one-to-one correspondence.

of itself; in the contrary case, it is said to be a finite sys-
tem."

(1) Does this mean that the whole and the proper part in
question are in one-to-one correspondence, and in no other?

Or (2) Does it mean that the whole is in one-to-one cor-
respondence with a proper part of itself, but is also related
to the same part in accordance with other schemes of corres-
pondence?

If the latter is understood to be the meaning of the defi-
nition, if the whole and its proper part are in a relation of
one-to-one correspondence, and in relations of one-to-two cor-
respondence, two-to-three correspondence, etc., then the notion
of 'similarity' is not the same in the case of infinite collec-
tions as it is in the case of finite collections; and, as I
shall show in the next section, we must then be careful to
distinguish the sense in which an infinite collection may be
said to be 'equal' or 'similar' to a proper part of itself,
from the sense in which two finite collections are said to be
equal to each other.

The former meaning is, however, the one intended by
Dedekind; for in his exposition two systems S and S' are simi-
lar when "every element of the system S'" is the "transform"
of a "single, perfectly determinate element of the system S"
(i.e., is bound up with it in accordance with a definite law).[1]
But if this is the meaning of the definition, the class of all

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(1) Essays on Number, pp. 53, 55.

classes each of which is 'similar' to a proper part of itself
is a class without any members; for we have found that in every
case where a one-to-one correspondence is discoverable, corres-
pondences of other sorts are also discoverable.

I conclude, therefore, that if Dedekind's definition re-
quires an exclusively one-to-one correspondence, there are no
infinite systems; and, if the definition is taken to mean that
the whole and its proper part are variously correspondent (by
which I mean that they may be shown to be related at the same
time in accordance with several schemes of correspondence),
then the definition of Dedekind is not new, but is logically
identical with the old definition of the infinite as the end-
less; for it is obvious that the property of being variously
correspondent is a property of any two endless series, as, for
example, any two endless series of whole numbers. The "New In-
finite" is then, as I ventured to suggest at the beginning of
this chapter, nothing but the "old" infinite in disguise, and,
accordingly, should not be expected to be a magical solvent
of difficulties in theology and philosophy.

3. Infinity and the Whole-Part Axiom.- We saw in the
preceding chapter that Royce in his Hibbert Journal article[1]
and Keyser in his little book on "The New Infinite and the Old
Theology"[2] have maintained that there is a sense in which an
infinite may be equal to a proper part of itself. The former

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(1) Vol. I, p. 37.
(2) Page 86.

suggested that by means of this discovery it might be possible to understand how the Individual can be a genuine self and at the same time be a part of the Absolute. The latter employed the principle of the equality of whole and part to refute an attack upon the Christian doctrine of the Trinity.

We soon find, however, that these writers are using the term equality in a particular and unusual sense. They, and also Mr. Russell, regard one-to-one correspondence as the meaning of equality, or at least as the criterion by means of which we may know that two given collections are equal. Thus Russell tells us that without referring to the report of the census we know that there are exactly as many English wives as English husbands, because monogamy prevails in England.[1] In like manner Royce illustrates the practical equivalence of one-to-one correspondence to equality by referring his readers to the case of a company of marching soldiers, each of whom is seen to carry one gun. Even without counting, he says, we know that the number of guns is equal to the number of soldiers.[2]

Now so far as I can see, one-to-one correspondence may be accepted as a criterion of equality, or even as being the meaning of equality, in the case of finite collections. Neither husbands, wives, soldiers, nor guns are infinitely numerous miltitudes; and when we seek in the manner suggested by these illustrations to assure ourselves of the numerical equality of

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(1) Scientific Method in Philosophy, p. 203.

(2) Op. Citat.

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the series to which we are directed as examples of the infinite, the argument breaks down. Our examination of these infinite series has shown that there is no more reason for saying that they are numerically equal than there is for saying that one of them is twice or thrice or any number of times as rich in elements as the other; for, if a one-to-one correspondence proves equality, then a two-to-one correspondence ought to prove that one is twice the other, etc. If the discovery of monogamy, polygny, or polyandry in England depended merely upon the caprice of the observer, we should certainly not know anything whatever about the relative abundance of husbands and wives; or if we were able at will to shift our point of view so as to see two or three soldiers carrying one gun, or one soldier carrying two or three guns, we should then have no basis for making a comparison of the number of soldiers and of guns.

Our conclusion must then be, that in all cases where an infinite whole is found to be in a relation of one-to-one correspondence with a proper part of itself (likewise infinite), these infinites are neither equal nor unequal one to the other, but the operation of quantitative comparison is thereby shown to be an operation that is not applicable to them, since in their case the notions of greater than, less than, and equal to are void of meaning.

It is interesting to find that this was the conclusion of Galileo. A paragraph quoted by Mr. Russell[1] as an introduc-

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(1) Scientific Method in Philosophy, p. 194.

tion to his account of a better way may be repeated here as an apt statement of the true position:

"I see no other way," said Galileo, "but by saying that all numbers are Infinite; Squares are Infinite, their Roots Infinite, and that the Number of Squares is not less than the Number of Numbers, nor this than that: and then by concluding that the Attributes or Terms of Equality, Majority, and Minority have no place in Infinites, but are confined to terminate quantities."

4. Transfinite Numbers and the Notion of Totality.- We saw in the preceding chapter that Cantor makes the "property of being of equal power with none of its parts" the property which distinguishes a finite from an infinite aggregate.[1] His definition of an infinite aggregate is, therefore, essentially the same as that of Dedekind, and, of course, is open to the same objections. Cantor tells us, further, that the first example of an infinite or transfinite aggregate is given by the "totality of finite cardinal numbers."[2] But as he himself speaks of "the unlimited series of cardinal numbers",[3] it is clear that in his usage the term 'totality' or 'whole' is not to be understood in the same sense as in the reasoning of Renouvier and Pillon. For, if the series of numbers is unlimited, what right have we to speak of it as a whole? If the word

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(1) The Theory of Transfinite Numbers, p. 99.

(2) Ibid., p. 103.

(3) Ibid., p. 99.

'totality' is understood in the sense in which it is employed by the neo-criticists, its use in a definition of the number "Aleph-zero" would constitute a begging of the whole question which is at issue between the finitists and the infinitists. If, however, when Cantor speaks of a 'totality' he means no more than that the collection or series which he calls a totality is <u>determinate,</u> that is, so defined that it is in principle possible to distinguish it from every other collection or series, and always possible, to tell whether or not it includes any given term or any other collection; then, as I remarked on page *113* above, such a totality may be infinite in the <u>old</u> sense, that is to say, may be <u>endless.</u> But in Renouvier's terminology an 'endless totality' would be a contradiction in terms. That is why a 'realized infinite' is logically impossible.

There may be and no doubt are, many logically distinguishable types of endless series; and, accordingly, it is perfectly legitimate for the mathematician to study these various types, and even to call them transfinite <u>numbers</u>, if he wishes to employ that terminology. But, unless we forget the difference in the meaning of the term 'totality', as employed by Cantor and by Renouvier, it is impossible to suppose that the definition of 'transfinite number' has made any contribution whatever toward the solution of the logical difficulty found by the school of Renouvier in the conception of a <u>'realized infinite'</u>.

5. <u>Self-Representation and the Infinite Regress</u>.- In Chapter VII, I promised to inquire into the validity of Royce's

attempt to escape from the difficulties of the "infinite re-
gress" by means of the conception of a plan or purpose which
is supposéd to give us an infinite multiplicity all at once
instead of one by one, or successively. Such a plan or purpose
was said to include the idea of "self-representation", and it
was this self-representative character that was supposed to
overcome the logical difficulties of infinity.

The issue thus raised is in principle the same as that
involved in the conception of the 'totality' of an unlimited
series; yet, inasmuch as we have taken Professor Royce as the
typical exponent of monistic idealism, it seems proper to de-
vote a few paragraphs to a discussion of the illustrations
and reasoning which he himself employs.

It will be remembered that this notion of self-represen-
tation is illustrated by the idea of a picture which contains
a representation of itself,[1] or by that of a "perfect map of
England" which is assumed to be "drawn upon the soil of Eng-
land."[2] "A map of England, contained within England, is to
represent down to the smallest detail, every contour and mark-
ing, natural or artificial, that occurs upon the surface of
England." The perfection of the map requires that there be a
"one-to-one correspondence, point for point, of the surface
mapped and the representation." In other words, if A is the

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(1) Hibbert Journal, I, 35.

(2) World and Individual, pp. 503ff.

surface mapped and A' the representation, "For every elementary detail of A, namely a, b, c, d, (be these details conceived as points or merely as physically smallest parts; as relations amongst the parts of a continuum, or as the relations amongst the units of a mere aggregate of particles), some corresponding detail, a', b', c', d', could be identified in A', in accordance with the system of projection used."

Let us consider first the notion of perfect representation where the copy is assumed to be smaller than the original, and then that of perfect self-representation.

In the opinion of Royce, "That a smaller picture should be a perfect representation of a larger object is a perfectly definable ideal."[1]

But that, even as an ideal, it is not a self-contradictory conception is by no means clear. If only details that are visible to the naked eye are pictured, there is no difficulty; for a microscope may be used to read the map. But if the object to be pictured is itself viewed under the microscope, and all the details thus visible are to be represented, it is clear that if the map or picture were much smaller than the original, exact legible representation would be impossible. If now it be replied, as Royce would perhaps reply, that the quality of being legible is irrelevant to the notion of perfect mapping, that all that is meant by it is, that for every detail of the

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(1) Hibbert Journal, I, 27.

original there shall be a corresponding detail in the copy, then it is clear that, if both original and copy are assumed to be made up of a finite number of indivisible units, such perfect mapping is impossible, unless the copy be assumed to possess a finer texture than the original (i.e., to contain a greater number of indivisible units to the square inch). If, however, there is assumed to be no difference in texture, the points or ultimate units of which the material of the map or picture is composed must be infinitely numerous.

In other words, the perfect representation of any object on a smaller scale implies, either that the copy, altho smaller, contains exactly as many ultimate units as the original, or else that the copy is a continuum or at least a compact collection of points. If we assume the notion of the continuum, there is, then, no difficulty in the idea of a perfect representation of a larger by a smaller surface. Indeed, if we assume that space is continuous or compact, such representation is an everywhere-present fact; because, for every point in a solid or a surface, there must then be assumed to be a point in any other solid or surface, however small the latter may be.

It is clear, then, that the idea of an absolutely perfect representation, even without the added notion of self-representation, requires the conception of an infinite multiplicity of elements, unless we make the above-mentioned assumption concerning the finer texture of the material of the copy. It is indeed essential to Royce's argument that the map be drawn upon the soil of England, and therefore be an example of self- repre-

sentation; but this is not essential to the idea of the map as an illustration of <u>infinity</u>. All that is required is the assumption that for every point in the surface of England there shall be a point on the map, <u>however small the map is drawn.</u> But as I have already remarked, this follows from the notion of the continuum. If two surfaces are both assumed to be continuous, then, however, large the one may be and however small the other, for every point in the one there is a point (or, for that matter, and this destroys the notion of a <u>definite</u> representation, there are two, three, or as many as you please) in the other. Instead, then, of supposing a map within a map, and so on forever, we can just as well suppose the original map, without the loss of any detail, to become smaller and smaller without limit. On either assumption the perfect mapping, even of only the <u>visible</u> markings of England's surface, would imply the notion of an infinite multitude of points in any designated portion of the surface upon which the map is drawn.

In the case of <u>self</u>-representation or rather of representation by a <u>part</u> of that which is represented, it is obvious that the notion of infinite multitude must be assumed; for here we have representation on a smaller scale, and there is no difference in the texture of the original and the copy, or at least of part of the original and the copy. We find then that we have been traveling in a circle. In an effort to avoid the endless regress we have defined a conception of self-representation, only to find, when we examined our conception a little

more closely, that it contains the very notion which it was designed to escape. If, then, the notion of an endless regress is self-contradictory, that of self-representation, or of a purpose that is infinitely rich in implications, is likewise self-contradictory.

6. **Summary of our Discussion of the New Infinite**:- An infinite system has been defined by Dedekind and others as a system which is similar to a proper part of itself. If this definition be accepted, the question arises whether there are any such systems. The proof given by Dedekind himself that 'my own realm of thoughts' is infinite depends upon the presupposition that every thought is itself an object of thought, and thus begs the question by tacitly _assuming_ that my system of thoughts is infinite.[1]

If the notion of 'similarity' employed in the definition is understood to mean an _exclusively_ one-to-one correspondence, no example of an infinite system is discovered by an examination of the mutual relations of the various series of cardinal numbers; we find, on the contrary, that in every case in which there is a one-to-one correspondence between the whole series and one of its proper parts, the subsistence of an _m-to-n_ correspondence can also be established.[2] If, on the other

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(1) See Chapter VII, Section 2.

(2) It should be observed, however, that this generalization is inductive merely. It has not been proved that a formula can be found for an m-to-n correspondence of whole and part in the case of _every_ proper part of the number system, but only for certain special types of proper parts; and where the formula for an m-to-n correspondence has been given, it has been verified by trial in particular cases, and
(over)

hand, the difinition is understood to mean no more than that
to be infinite a system must be in a relation of one-to-one
correspondence with a proper part of itself, but may also
be in other relations of correspondence with the same part,
then the series of cardinal numbers is an infinite system;
but, thus interpreted, the "new" definition is logically
equivalent to the "old", inasmuch as every endless series
of cardinal numbers is thus related to every (endless) pro-
per part of itself.

Therefore, if the definition is taken in the one sense,
it remains to be shown that there are any infinite systems;
and, if it is taken in the other sense, the only systems that
have been shown to be infinite are those that are already
known to be infinite in the old sense of the term.

The apparent bearing of the new conception of infinity
upon the problems of theology is the result of a double use
of the terms 'equality' and 'totality'; and the principal re-
sult of this chapter is the conclusion that the "discovery"
of the New Infinite does not solve the logical and psycholog-
ical difficulties which are found in the conception of the
Absolute.

(cont'd)

> not proved deductively. Yet in the absence of any nega-
> tive instances, the inductive generalization is justified.
> Moreover complete generality of neither kind is strictly
> required by the argument. It would be sufficient to
> show that in every case that has been adduced as an ex-
> ample of the similarity of the whole series and a proper
> part of itself, many kinds of correspondence are found.

CHAPTER IX
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CONCLUDING REFLECTIONS ON FINITIST THEOLOGY

1.   A Recapitulation of the Argument for the Divine
Finitude:-   It may be well to give a summary restatement
of the reasonings which have led us to conclude that God is
"finite".

(a)   The conception of a realized infinite is a contra-
diction in terms; for that which is infinite or endless is
not realized or complete.   The "new" conception of infinity
does not escape the logical defect of the "old"; for, as we
have seen, the attempt to get rid of the self-contradiction
by including it in the definition is not satisfactory: the
contradiction, the concealed from view, still remains.   Now,
as Royce himself has shown, the Conception of the Absolute
as defined by him presupposes the realized infinite.   There-
fore we conclude that the Absolute of monistic idealism is
logically impossible.[1]

(b)   Even if we should ignore the objection just men-
tioned, the conception of the Absolute would be self-contra-
dictory in other ways.   The Absolute is said to experience
all in an "Eternal Now"; but the notion of a "timeless" ex-
perience that includes experiences of temporal relation is
self-contradictory.[2]

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(1) Chapters VII and VIII.

(2) Chapter III, Section 2, (b).

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(c) There can be no all-inclusive experience. Not only is it impossible for the Absolute (if the term may be retained) to experience past and future as present, but it is psychologically impossible for certain of the experiences of the individual mind, especially such as are conditioned by limitation and isolation, to be identical parts of the experiences of an all-inclusive mind. For such a mind, by virtue of the fact that it is all-inclusive, is unable to have these experiences.[1]

(d) The conception of a mind that possesses knowledge about all things, and yet does not include everything as an identical part of its own experience, must also be rejected, altho for a different reason. If a Being were omniscient, even in this restricted sense, such a Being would be, if not in Royce's phrase "world-possessing", yet certainly world-controlling, that is to say omnipotent; and, in a world such as ours, no good being can be omnipotent. But God is good. Therefore, God is neither omnipotent nor omniscient.[2]

(e) The theory of monistic idealism is unsatisfactory as a practical philosophy, inasmuch as it logically implies a life of quiescence rather than of action.[3]

(f) Not only is the conception of the Absolute logically and psychologically impossible as well as ethically

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(1) Chapter III, Section 2, (b).

(2) Chapters IV and V.

(3) Chapter III, Section 2, (c).

unsatisfactory; but, considered as the equivalent of, or as a substitute for, the traditional idea of God, it is religiously inadequate. It lacks ethical worth, and does not satisfy man's craving for fellowship with a Person better and more powerful than himself.

On the other hand, the theory of a Supreme Being who is limited in knowledge and power, is logically unobjectionable, is not inconsistent with the presence of evil in the world as it now is, implies the need of human cooperation with God in the contest with evil, and offers to man an object worthy of his worship, a Person who desires his love.

2. The Relation of Logical and Ethical Finitism:- The reasons just given for theological finitism may be roughly classified as logical or psychological, on the one hand, and ethical or religious, on the other. The first three (as enumerated in the preceding section) would then be considered as logical (or psychological); and the last three, as ethical (or religious). Now if someone should fail to be impressed by one or the other class of arguments, it is quite possible that he might adopt ethical finitism without logical finitism, or <u>vice</u> <u>versa</u>.

We are so accustomed to hearing the words 'eternal', 'infinite', 'omniscient', 'omnipotent', etc., associated,

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(1) Chapter III, Section 3, (a).

that it is hard to avoid regarding them as synonymous, or, at least, as implying one another. I presume that most people would assume without question, that, if a Being is defined as infinite in knowledge, he is also omniscient, and, if defined as infinite in power, he is also omnipotent.

A little reflection, however, will convince us that this inference is not valid: a being might be infinite in knowledge or in power, without being omniscient or omnipotent. Forgetting what we have learned from Renouvier and Lillon, let us suppose that a being is infinite in respect of knowledge. In other words, that this being knows an infinite number of things, or of 'knowledge-elements'; that is to say, an infinite number of propositions would be required to express this infinite knowledge. Now, suppose one knowledge-element or any finite number of them to be forgotten, or never to have been known; the infinite mind remains infinite as before; because the subtraction of a finite number from an infinite number leaves an infinite remainder. It is therefore conceivable that in an infinite world an infinite mind might not be omniscient. There might be some things, such as undetermined future events, or the solutions of practical problems, which such a mind would not know.

On the other hand, in a finite world, it is conceivable that a finite mind might be omniscient. In a finite world the number of possible knowledge-elements would be finite; hence, for a mind to know them all, it would not be necessary for it to be infinite. In such a world even a

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finite mind might be assumed to know all truths, and to possess the answers to all questions, the solutions of all problems.

The view which I have ventured to call "ethical finitism" is not, then, logically bound up with the finitism of Renouvier and Pillon. In their theory, not only God, but also the world, is finite; and in a finite world,[1] a finite God might conceivably be all-knowing, in the sense that there would be nothing knowable which he would not know; and all-powerful, in the sense that all events would be subject to his control. On the other hand, if we should eventually be persuaded that the "realized infinite" is logically unobjectionable, the ethical reasons for denying the omnipotence, and inferentially the omniscience, of God would remain with all their force, and, in my opinion, would be decisive.

5.   The difficulties of Finitist Theology:-   Let us not, however, assume too hastily that finitist theology is in all respects completely satisfactory. The doctrine of a finite God is theoretically unobjectionable; but some details of the doctrine must be determined before we pronounce it completely satisfactory, as a religious doctrine. Several

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(1)   The world is not finite, however, even for Renouvier, in the sense that we can set limits to it; for we are always compelled to regard it as greater than any magnitude that might be assigned to it. Yet so far as we can think the world, or so far as it may be supposed to be grasped in thought by any mind, as, for example, by a divine mind, it must be a whole, and therefore finite. See Logique générale, I, 366 and II, 21f.; cf. Hodgson's account of Renouvier's Philosophy, Mind, 1881, pp. 43ff.

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questions suggest themselves:

(a) <u>Is finitist theology a monotheism or a polytheism?</u>
If God is the whole of existence, or even if he is assumed
to be distinct from, or only a part of, the universe, but
yet omnipotent; there can be no doubt that there is but <u>one</u>
God; for there can not be more than one Omnipotent. If, how-
ever, we maintain that God is only a part of being, and that
his power is so limited that some parts or aspects of being
are not subject to his control, the proposition that <u>there is</u>
<u>but one God</u>, is far from self-evident.

For most of us, indeed, the issue of polytheism <u>versus</u>
monotheism does not present a "live option". It does not
appear to have been a live issue even for William James.
Charles Renouvier, however, declines to decide one way or the
other, and, indeed, is very favorably disposed toward polythe-
ism. "The doctrine of unity", he says, "submits all the beings
of the world to a royal authority which varies from the most
absolute autocracy to a government tempered by a measure of
liberty conceded to the subjects."[1] On the other hand, the
doctrine of a plurality of divine beings appears to Renouvier

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(1) Renouvier, <u>Psychologie Rationelle,</u> Vol. III., p. 259.

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more accordant with republicanism. "Polytheism is the plurality of powers in the unity of direction". The same considerations which make for a belief in immortality lead Renouvier to look with favor upon the conception of a plurality of Gods. He thinks it improbable that all personal beings but one should be such as to be included in the class of men; and, like the ancients, supposes that men may be raised to the rank of Gods.[1]

One of his interpreters remarks that, tho one may at first be surprised and possibly shocked by Renouvier's evident liking for polytheism, the saint-worship of the Roman Catholic Church would readily suggest such a doctrine. Furthermore "the theology of the Councils of Nicaea, of Constantinople, of Chalcedon, affirm, and modern theologians still accept, the multiplicity of divine persons. The Christian Trinity is not a doctrine of the divine unity."[2]

It is true that Renouvier suggests that "this polytheism is far from being irreconcilable with the unity of God;..... for the one God would then be the first of the superhuman persons, rex hominum et deorum."[3] It is, however, perfectly conceivable that there should be a number of superhuman persons all finite in power, and that none of them should be "king". Indeed, to anticipate the theoretical doubt which is discussed

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(1) Renouvier, Psychologie Rationelle, Vol. III., pp.455f.

(2) Arnal, Philosophie Religieuse de Charles Renouvier, p. 148f.

(3) Psychologie rationelle, III, 455.

in the next section, if all the members of such a pantheon, whether it were monarchical or democratic in its organization, could be known to be <u>good</u>, it **is not evident** that the polytheistic conception would be religiously unsatisfying. However, as remarked above, the issue does not present a "live option", and it will be better to assume, in the further discussion, that there is **but one God.**

(b) <u>Is the Supreme Being good?</u> It is true that the logical motive for the doctrine that God is finite is the desire to save his goodness. Our argument has been, God is good; the world is, in part, evil; therefore God's power is limited. His finitude is thus an inference from his perfect goodness; but it is evident that the argument can not be reversed. The perfect goodness can not be inferred from the finitude of the Deity.

If we divest ourselves of our prejudices, and forget the affinity of the words good and God, it is possible to conceive the existence of a being who is immeasurably more powerful than all others, and yet is not good. Such a Supreme Being might be defined as Power plus Intelligence plus Conscious Purpose. But the purpose toward which the power is directed need not include any concern for the pains and pleasures or the ideal values of humankind. As a man intent upon the accomplishment of some end goes his way, and does not even notice the ant-hill which his hurrying foot has demolished, so the supreme Purpose might seek its own fulfillment wholly

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regardless of the hopes and wishes of the residents of our planet. A consciously purposive power wholly uninterested in the affairs of men is, accordingly, a _logically_ possible conception of God.

Even the addition to this conception of that notion of an interest in human doings and sufferings which, I have said, is not necessarily included in the universal purpose, does not bring us at once to the Christian thought of a Father-God. It may, indeed, fall far short of it The interest of the Supreme Power in human affairs might be entirely non-moral. It might be an interest in mundane happenings as a spectacle. Such a God might take pleasure in the happiness of his creatures, and _also_ in their pains and disappointments, in their sorrows as well as in their joys. In short God as thus defined might be a Supreme Setebos, like him of whom Caliban muses in Browning's verse:

> "Thinketh such shows nor right nor wrong in Him
> Nor kind, nor cruel: He is strong and Lord.
> 'Am strong myself compared to yonder crabs
> That march now from the mountain to the sea;
> 'Let twenty pass, and stone the twenty-first,
> Loving not, hating not, just choosing so."

If, now we add to our conception of a Supreme Being the notion of moral quality, there still remains a horrible and repulsive possibility; for moral quality may be bad as well as good. The Supreme Power might be malevolent.

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A reversal of the traditional theodicy is not inconceivable. Indeed the very argument by which men have sought to prove that this is the best, might be employed with a few alterations to prove that it is the worst possible world. The elements of goodness which mar the perfection of absolute evil might be said to be required to set off the evil by contrast; or the Supreme Fiend might be supposed to be limited in his management of the universe by a sort of "iron law of wages"; a certain amount of pleasure might be necessary to insure the continuance of the pain-economy.

To be sure, no one takes such a possibility very seriously; yet, from the standpoint of mere logic and cold facts, it is not unthinkable. The goodness of God can not be proved. It can only be believed; that is, assumed as a working principle of human life. And, unless this assumption is made, the doctrine of a finite God has no religious value.

(c) Does the God of finitist theology exist? In a discussion of the adequacy of the idea of God the existential question can not be wholly ignored. It is true that the value of the idea is not wholly dependent upon its objective reality; [1] yet, if a man were convinced that the idea of God is merely an ideal, for him its value would be seriously impaired. If the existence of God is to be proved, the demonstration will have to consist in an exhibition of the evidences of his

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(1) Mill, Autobiography; Vaihinger, Die Philosophie des als Ob.

presence in the world. But no one will maintain that the argument from design establishes more than the _probability_ of God's existence. Moreover, even if, without evidence of his presence, we could become convinced of his existence, mere existence would not be enough. An entity that _does_ nothing (altho the thought of such an entity might avail to relieve one's loneliness) would not be completely adequate. From this point of view the question of the existence of God merges in that of his power.

We have criticized monistic idealism on the ground that, by reason of its doctrine of the eternal perfection of the Whole, it tends to quietism, to the mood of the "moral holiday". But there is danger of reaching a similar position from the opposite direction. The finite God may be so limited in our thought of him as to make it doubtful whether he can in any significant sense be said to be _supreme_. Thus the same modification that makes the traditional doctrine theoretically tolerable threatens to destroy its practical value. For if men should be convinced that, while there is a God, his power and intelligence are not adequate to the task of world redemption, they would fall into despair; and nothing so completely paralyzes action as despair. There is inspiration for strong natures in the thought of coöperation with a God who actually needs our help; but, not all are strong, and even the strongest and most daring spirits have their hours of depression, when they need to feel that there is sufficient power on their side to assure the ultimate victory of the

Right. From this point of view the question of God's exis-
tence is equivalent to a question about the salvability of
the world. It may, accordingly be rephrased thus;

Is there in this world of ours, sufficient power and in-
telligence in the service of good will, to assure the realiza-
tion and preservation of the values that we hold dear?

4. Finitist Theology and the Right to Believe:- By
William James finitist theology is combined with a doctrine of
the "will to believe". The existence of God can not be proved
by scientific methods of demonstration. Considered as a hy-
pothesis it is, indeed, not inconsistent with the facts; but
neither is the contrary hypothesis. Now, says James, this
is a case where we ought to practise the will to believe. "Our
passional nature not only lawfully may, but must, decide an
option between propositions, whenever it is a genuine option
that can not by its nature be decided on intellectual grounds."[1]
In other words, tho James nowhere puts it in just this way,
we are at liberty to act as if we were certain of God's exis-
tence, even if we have no intellectual grounds, or have only
insufficient grounds, for certainty.

There are, however, obvious objections to this procedure.
It seems to encourage the all too common tendency to super-
ficial thinking, where one's own interests and prejudices are
involved; and there appears to be a suggestion of intellectual

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(1) The Will to Believe, p. 27.

dishonesty in the proposal to believe when there is not sufficient evidence to convince the reason. In my opinion, however, these objections are based upon a failure to distinguish between different senses of the world 'believe'. It must be admitted, I fear, that James himself is partly responsible for these confusions.·

There are at least three kinds of 'believing". In the first place one may be said to believe when he feels that he knows. Secondly, belief may be understood in a wholly practical sense. One shows his faith by his works; and it is easy to pass from this principle to the view that faith, or belief, is the action which would normally accompany or result from belief in the first sense. It is this second sense of believing, the acting as if one knew, which James seems to have chiefly in mind when he speaks of a "will to believe."

There is, however, a third sense of the word 'believe', which seems to be implied, tho not clearly distinguished from the others, in James' exposition. It differs from our first sense in being without real or supposed theoretical justification; and from the second in being in a genuine sense an affair of feeling, rather than of will or action. If the first kind of believing is the 'feeling that one knows', and the second, 'the acting as if one knew', the third may be said to be 'the feeling as if one knew'.

That this third kind of belief is psychologically possible, is a matter of everyday experience. Our feelings are seldom quite appropriate to the theoretical situation. The

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passenger on the railway train who is nervous and ill at ease because of the fear of a wreck, is permitting emotion to out-run the evidence. But the same is true of the passenger who has no feeling of anxiety whatever; for there is some danger. And, while the probability of a wreck is not sufficiently great to justify the fears of the one, it is not so small as to justify the utter calm of the other. Belief, in the third sense, the feeling as one would feel if one had theoretical knowledge which he does not have, is thus illustrated by our usual freedom from emotional disturbance on a rapidly moving train. We know that a thousand and one things might happen, any one of which might plunge us to almost instant death; we may be theoretically persuaded that there are a certain num-ber of chances in ten million that we will on this particular day be killed in a wreck; we may even allow our minds to dwell upon these chances of destruction; and yet feel as we should feel if the chance were absolutely nil.

This sort of belief is even better illustrated in our social relations. Here, too, the degree of certainty which we feel is not usually the exact degree that would be logic-ally appropriate to the situation. We can not prove that the bank will not fail; that people are telling us the truth; that our best friends will not play us false; that the Causes to which we devote ourselves are really worthy of our devotion. We can have no intellectual certainty in regard to these mat-ters; and yet we not only act, but also feel, as we should act and feel if we were intellectually certain. In a word, our

faiths and loyalties habitually outrun the evidence.

In the same way, altho we do not know that there is a God, or that the world is moving toward a worthy goal, and can not therefore be said to believe in the existence of God or in the salvability of the world in the first of our three senses of the word 'believe'; we have the right to believe in the other two senses.

We are justified in accepting the existence of God as an assumption in accordance with which to plan our lives; and also in feeling a greater degree of certainty with reference to his existence than **is** theoretically warranted.

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